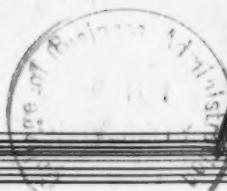


# Manufacturers' Record

## Exponent of America



\$6.50 per Year.  
Single Copy, 20 Cents.



Baltimore, Md.  
MARCH 27, 1930

## To Tell the Story of the South's Resources and Progress

The South is even now upon the threshold of the greatest industrial development in its history. What has been accomplished up to the present time will be far surpassed by the achievements of the coming years. A story of what has been done and a forecast of what is to be done are especially important to every man and woman in any way whatsoever interested in the future of the South and the progress of its people.

For years the Manufacturers Record has annually published the Blue Book of Southern Progress. It has become the recognized authority throughout the entire country as to the progress and resources of the South. Without a knowledge of the facts which are given in it, it is impossible for anyone rightly to measure what the South has done and what it will do from now on. Leading bankers and business men generally throughout the country have come to look upon the Blue Book of Southern Progress as the final authority on everything which pertains to the past, the present and the future of this section. It tells the story of the advance in education throughout the whole South. It tells of what industrial development has taken place, what progress is being made in the advance of electric power and of industry of every kind. It tells of the mineral resources of the South, and what has been accomplished in their development.

In accordance with our annual custom we announce that the final compilation of facts and figures and editing of the Blue Book is drawing to a close, and that within a few weeks it will be ready for distribution. As an advertising medium to reach the people of all sections interested in any phase of Southern development it is extremely valuable. It should be in every business office and available to every family of the South. To investors in the South living in other sections it is absolutely essential if they would understand the security on which their investments are based.

The price, prepaid, of the Blue Book, which will have about 300 pages as in former years, is put at 50 cents a copy for single copies, or 40 cents each in lots of 500 to 1,000, and 30 cents each for 1,000 or more. Many business concerns in the South have taken from a few copies to lots of a thousand, in order that they may use them to good advantage in spreading the news of the South's advancement to the world.



# Wipe Out Maintenance!



#### Expansion Joint

For Pavements, Sidewalks,  
Roads, Buildings, Reservoirs,  
Sewer Systems

#### Bridge Planking Fibrated Asphalt

#### Industrial Flooring

#### Waterproofing Protection Course

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#### Fibrated Bituminous Construction Materials

Servicised Fibrated Asphalt Expansion Joints and other premoulded products are designed to protect concrete or rigid construction work of all types against the consequences of its own rigidity when confronted with nature's irresistible forces of expansion and contraction.

Public and private structures whether buildings, roads, streets, walls, viaducts, concrete bridges, etc., are protected against the destructive results of those stresses by the installation of these premoulded safety strips.

Servicised products are pressure produced from specially refined asphalts to which fibrous matter is added for elasticity and reinforcement—then formed hot under pressure into the required shapes,—ready for use and easily handled.

They are invaluable to all forms of concrete construction and especially their use makes for better, smoother and more durable highways, their cost is little, but there they save their weight in gold.

The Servicised Products Corporation of Louisiana at Marerro is now ready to serve the South promptly.

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DISTRIBUTORS and DEALERS IN PRINCIPAL TRADING CITIES      Factory, 6051 W. 65th St., CHICAGO, ILLINOIS



# SAVING \$13434.00 *in 178 days for* **KOHLER of KOHLER**

THE NORTHWEST is not a one-purpose machine! Put it in your plant as Kohler & Kohler, Graham Bros. and many more have done. It's a "Jack-of-all-trades" and master of all.

Look at the plan above. See the uses

to which Kohler & Kohler put their machine—and note the savings it has made. A survey of your plant may develop the same possibilities for savings.

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### Stop the Leaks

In the construction of Dart Unions, the spherically constructed Bronze to Bronze seats eliminate the possibility of a leak. Extra heavy iron ends add strength and durability. Every Union is tested, and we guarantee to replace any defective union returned to us with two perfect ones.

We will mail you a free sample on request.  
A shape and size to fit every need.  
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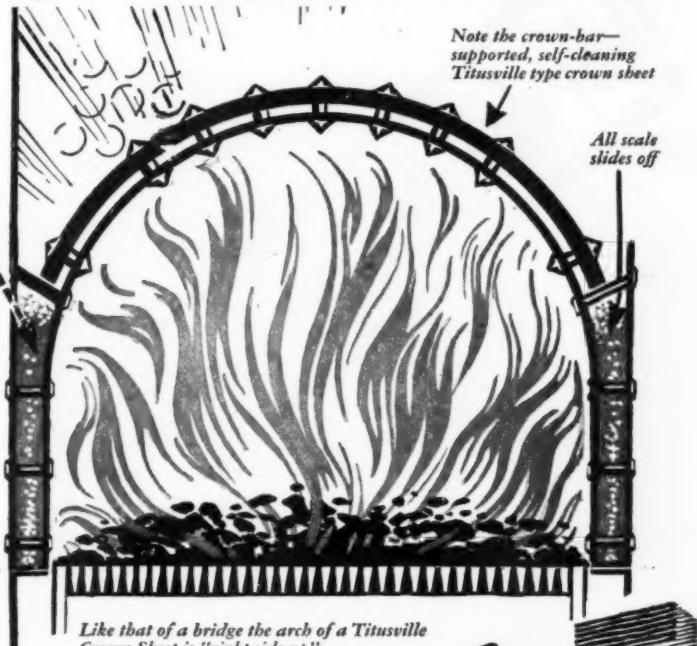
**DART  
UNIONS**

E. M. DART MFG. CO., Providence, R.I.  
The Fairbanks Co., Sales Agent.  
Dart Union Co., Ltd., Toronto, Canada.

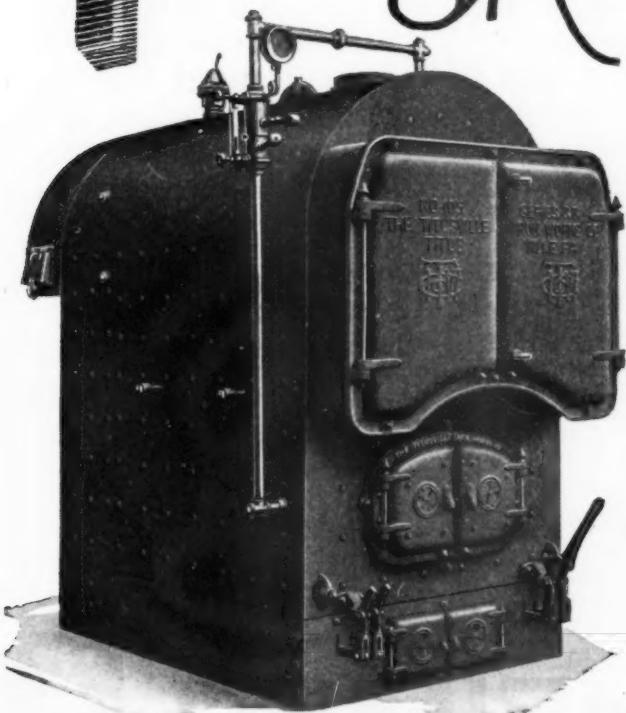
Specify Boilers by Name . . . so Long as the Name Spells ENDURANCE

*The*  
**Curve**  
*of*  
**Long Life**

It's the even curve of the crown sheet that marks long life. Any flattening, and scale could collect—and if it did 'twould be an open invitation for the metal to start burning out.



**TITUSVILLE**  
*"SR" Welded Boilers*



For a compact boiler room install this Titusville Type "SR"

have a smooth rounded crown sheet just to discourage scale from collecting. It is self-cleaning; the scale slides off as fast as it forms. And don't overlook the fact that a clean crown sheet transmits heat faster. A scale deposit is fine insulation. All the more reason for pinning your faith to Titusville excellence of design and building. There's a type for every need, purpose, condition or requirement. *Investigate! There is a difference in Titusville's favor.*

**THE TITUSVILLE IRON WORKS CO.**

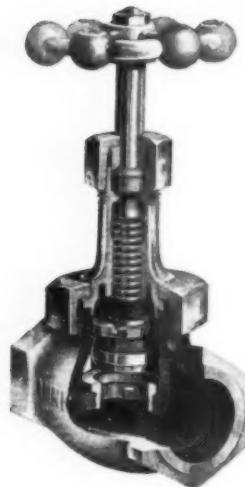
*Division of Struthers Wells-Titusville Corporation*

TITUSVILLE, PA.  
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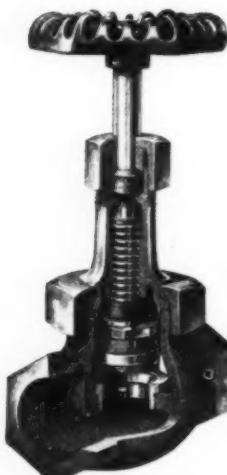
TIW-46

*Why don't Beaver's teeth wear out?*



Iron Body "Ferrenwo"

The complete Lunkenheimer line includes valves of bronze, iron and steel; gate, globe, angle, cross, check, blow-off, non-return, pop safety and relief valves; lubricators, oil and grease cups; cocks, whistles, fittings, etc. Descriptive literature will be sent upon request.



Bronze "Renewo"



*Because they automatically renew themselves. As the teeth show signs of wear, more tooth grows out to take the place of that which has worn off.*

Renewability of parts subject to wear is a prime factor in the long life of Lunkenheimer Valves. The measurement of all parts is accurately gauged in manufacture, positively assuring that any replacement part will be exactly the same size as that which is to be renewed.

This feature coupled with the characteristic sturdy over-all construction of Lunkenheimer Valves means a practically permanent installation, with continuous satisfactory performance, infrequent repairs and low maintenance expense.

Lunkenheimer Valves are an investment that yields gratifying returns in long-time, low-cost service.

Distributors located in all industrial centers, carry Lunkenheimer Valves and Engineering Appliances in stock. They will serve you promptly.

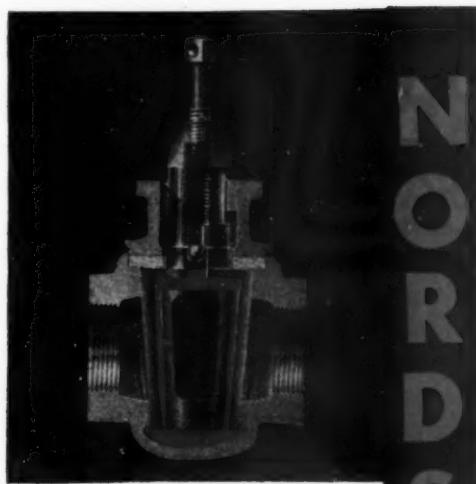
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NEW YORK CHICAGO BOSTON PHILADELPHIA  
PITTSBURGH SAN FRANCISCO LONDON  
EXPORT DEPT. 318-322 HUDSON ST., NEW YORK



**LUNKENHEIMER**  
**VALVES**

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★ 11,670  
Slogans entered in the contest recently conducted by the Merco Nordstrom Valve Company were carefully analyzed by the Jury of Awards. We take this opportunity to thank the many contestants for their contributions.

### MERCO NORDSTROM VALVE CO.

SUBSIDIARY OF THE MERRILL COMPANY  
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**Factories:** Oakland, California and Belleville, New Jersey; Canadian Manufacturers—Peacock Bros., Ltd., Montreal, Cobalt, Winnipeg, Vancouver; England—Audley Engineering Co., Ltd., Newport, Shropshire; Buenos Aires, Argentina—General Electric, Soc. Anon., Victoria 618 Esq. Peru.



## W★ WINNING SLOGANS

### for NORDSTROM VALVES Announced . . . .

#### First Award (\$250.00)

##### Nordstrom—The Perfect Application of a Principle

Submitted by J. L. PILLOW, Standard Oil Co. of La., Baton Rouge, La.

#### Second Award (\$100.00)

##### Hydraulic Lubrication Insures Effective Manipulation

Submitted by G. E. GENUNG, 13326 Terry Ave., Detroit, Mich.

#### Third Award (\$50.00)

##### Fabricated and Lubricated for Long Life

Submitted by G. C. BEMIS, Jr., American Smelting & Refining Co., Santa Barbara, Chihuahua, Mexico

#### Fourth to Eighth Awards (\$10.00 Each)

##### Won't Leak, Won't Stick, Lubrication Does the Trick

Submitted by T. S. BARLOW, 501 East 21st St., New York City

##### The Valve Controls the Flow, the Screw Controls the Valve

Submitted by HENRY A. WEBER, 2331 Donald St., Ames, Iowa

##### The Turn of a Screw Pushes Lubricant Through

Submitted by HAL D. DRAPER, Asso. Prof. of Chem., State Teachers' College, Fresno, Calif.

##### Nordstrom's Perfection Is Your Protection

Submitted by RUSSELL EGBERT, Box 433, Marcus Hook, Pa.

#### Eighth to Twentieth Awards (\$5.00 Each)

##### For Those Whose Goal

##### Has Been Control

Submitted by ARTHUR ATKINS,  
1055 Green St., San Francisco, Calif.

##### Nordstrom's Lubricated Action Is the "Seal" of Satisfaction

Submitted by S. ST. CLAIRE,  
308 Oakland Ave., Oakland, Calif.

##### Bringing Pressure to Bear

##### on Valve Troubles

Submitted by ALBERT S. EGGLERON,  
781 Ocean Ave., Brooklyn, N. Y.

##### Will Stand the Strain on Any Main

Submitted by FRED J. MAPLES,  
Box 368, Morris, Okla., c/o O. N. G. Corp.

##### Simple to Lubricate, Easy to Operate

Submitted by G. W. MARTINDALE,  
2254 Whitney Ave., Niagara Falls, N. Y.

##### They Lubricate As They Operate

Submitted by EDITH M. BELL,  
1229 Boardwalk, Atlantic City, N. J.

##### Loosened and Tightened by Lubricant

Submitted by L. D. NICOLSON,  
1345—30th St., N. W., Washington, D. C.

##### Where Nordstroms Go In Troubles Go Out

Submitted by E. J. SHAUNCE,  
146 No. 79th St., Highland Park (Upper Darby), Pa.

##### With Every Connection Comes Your Protection

Submitted by C. G. SCHRAM,  
1322 S. Wabash Avenue, Chicago, Ill.

##### Once Installed Never Stalled

Submitted by CHARLES W. SMITH,  
3736—26th Ave. West, Vancouver, B. C.

##### Made Their Way By the Way They're Made

Submitted by E. D. MURPHY,  
Box 487, West Tulsa Station, Tulsa, Okla.

##### Satisfaction at Every Turn

Submitted by CLAIR WILKES,  
Sevi. Ore.

# Repeat Orders Testify to the Dependability of



## Bailey Water-Cooled Furnace Walls



**I**N both Central Station and Industrial Power Plant Service, Bailey Water-Cooled Furnace Walls have made an enviable record for efficiency and dependability. In both these services the cost of furnace maintenance is carefully watched and inefficient linings are quickly replaced.

It is significant that over 40 per cent of the Bailey Water-Cooled Furnace Walls that have been ordered or placed in service during the past year have been repeat orders. These repeat orders are unquestionable recommendations to the dependability and efficiency of the Bailey Water-Cooled Furnace Wall.

Among the furnace designs included in these repeat orders are furnaces for the burning of pulverized coal, oil and gas, and for chain grate and underfeed stoker firing—these installations are indicative of Fuller Lehigh ability to design, construct and install furnaces for any method of firing no matter how special the conditions may be.

[ Complete information regarding the adaptability of Bailey Water-Cooled Furnaces and Fuller Lehigh Pulverized-Coal Equipment to your needs may be obtained by inviting our engineers to work with yours in studying your boiler plant requirements. ]

**FULLER LEHIGH COMPANY, FULLERTON, PENNA.—A BABCOCK & WILCOX ORGANIZATION**

# FULLER LEHIGH

PULVERIZED-COAL EQUIPMENT ~ WATER-COOLED FURNACE WALLS

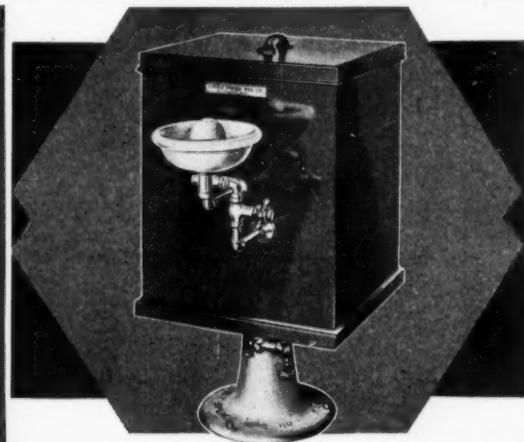
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# SUPREME GULF MOTOR OIL

THIS entirely different two-base Motor Oil is just what you have been wanting—it is a tough, heat resisting, able-bodied oil, designed for the lubrication of the modern motor—it is made by combining the best properties of both the paraffine and naphthene base crude oils—it possesses all of the good and none of the bad features of single base oils.

*At the Sign of the Orange Disc*

**GULF REFINING CO.**



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Every manufacturing plant should have adequate drinking facilities. They should have sanitary fountains. It means much over the hot months of summer.

Install Rundle-Spence fountains—all who drink from them are refreshed and invigorated—ready for more productive work. And they have a big sanitary feature of design.

Send for our latest catalog which describes and illustrates R-S health "bubblers."

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63 Fourth St., Milwaukee, Wisconsin

High Temperature Cements

**FIREBOND**  **THERMOLITH**  
REFRACTORIES  
Fireclay High-Alumina Silica Chrome Magnesite  
Acid-Proof Brick  
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World's Largest Producer of Refractories

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### Water Minus All Hardness

insures even dyeing; smooth running threads; reduction in thread and needle breaks in knitting.

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**HIGH GRADE GREY IRON AND  
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Pressure and Gravity type for Municipal Water Supplies, Rayon Manufacturing Plants, Textile Finishing Establishments, Raw Water Ice Plants, Laundries, Etc.

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**EXCELSIOR** All Standard and  
Special Shapes  
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Filters—Pressure and Gravity  
Softeners—All types

127 years old

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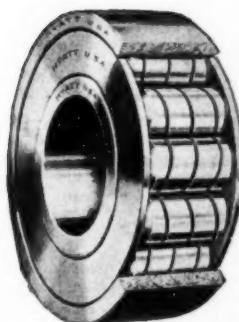
CHICAGO



# "Engineered for



## Low Headroom . . . high Hook-lift !



Every Bearing A  
Roller Bearing

**S**QUAT . . . to fit the very minimum of low headroom, compact . . . without sacrifice of accessibility, designed to utilize the last inch of hook lift and close approach to craneends. Roller bearing equipped throughout for smooth, swift, dependable operation — these are the features of the standard Milwaukee Low Headroom Crane Trolley.

Milwaukee Engineers designed this trolley . . . the Type GR, for the difficult conditions of low headroom and high hook lift frequently met with in traveling crane requirements. It is adapted to a standard crane bridge or, where extreme low headroom demands it, a special crane bridge. It is the only standard low headroom crane

trolley available in capacities of 3 to 30 tons.

Industry recognizes Milwaukee Roller Bearing Cranes for their greater mechanical efficiency, lubrication and maintenance economies, and power saving. Milwaukee was the first crane builder to apply roller bearings throughout from motors to bottom block. In the type GR Trolley another contribution to progressive crane practice has been attained . . . a unit that makes for dependable operation, additional safety, greater strength, and longer service life in low headroom cranes.

Specifications and complete description of this trolley will interest you, write for them.

MILWAUKEE ELECTRIC CRANE & HOIST CORPORATION  
MILWAUKEE *Representatives in Principal Cities* WISCONSIN



# MILWAUKEE

LOW HEADROOM CRANES 3 TO 30 TONS  
STANDARD CRANES TO 50 TONS



# *Forging Ahead with AIR*

Compressed air is now being used in many shops to operate forging hammers—with decided advantages. When Westinghouse-National compressors supply the air, additional economy is realized.

Westinghouse-National compressors are economical in space occupied, in time and cost of installation, in power consumed (the start and stop method of control is used), and in maintenance expense, for they are built to endure.

Motor driven types are available in sizes up to 700 cu. ft. displacement. The installation shown comprises five of the 3VS type, totaling 1600 cu ft. A flexible governing arrangement permits operation of a single machine when air requirements are light, and starts the others successively as more air is needed.

Westinghouse Traction Brake Company  
General Office and Works: Wilmerding, Pa.

## **WESTINGHOUSE—NATIONAL Air Compressors**

**“QUALITY MACHINES FOR QUALITY SERVICE”**



THE surest guarantee of excellence in any product is the seriousness with which the men responsible for its manufacture take their jobs . . . Russell, Burdsall & Ward have been making bolts and nuts since 1845.

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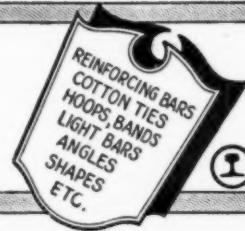
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The MOCCASIN BUSHING COMPANY, manufacturers of MOCCASIN OIL DISTRIBUTING BUSHINGS, is prepared to supply engine brasses, brass or bronze castings of all descriptions and MOCCASIN solid or cored bronze bars at reasonable prices.

Send your specifications to the MOCCASIN BUSHING COMPANY, 2000 Chestnut Street, Chattanooga, Tennessee. Your order will receive our prompt attention.

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You can secure your entire steel requirements from Bethlehem—with the assurance that each item is as good and dependable as the facilities of a completely equipped organization with years of experience can make it.

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DEPENDABLE CASTINGS  
Shipped PROMPTLY  
CARBON MANGANESE ALLOY  
**DEEMER STEEL CASTING CO.**  
PATTERN and MACHINE WORK  
DEEMER STEEL CASTING CO.  
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**QUALITY PIG IRON**PLUS  
Intelligent Cupola Service

**SLOSS-SHEFFIELD STEEL & IRON CO.**  
BIRMINGHAM, ALA.



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**TACKLE BLOCKS**

A reliable block to meet every requirement.

Write for Catalog No. 22

W. W. Patterson Co., 57 Water St., Pittsburgh, Pa.

**STRUCTURAL STEEL REINFORCING**

**STEEL**  
insures  
strength  
and  
security

ORNAMENTAL  
IRON WORK  
STEEL WINDOWS  
STEEL DOORS  
STEEL TRIM  
SHEET METAL  
PRODUCTS



**PIDGEON-THOMAS IRON CO.**  
MEMPHIS, TENN.

*That Beauty  
may have  
Permanence*



Merchants National Bank Building, Mobile, Ala.  
Warren, Knight & Davis, Birmingham, Architects.  
Smallman Construction Company, Birmingham, General Contractors.  
Virginia Bridge & Iron Co., Birmingham, Fabricators and Erectors.

THE new home of the Merchants National Bank, Mobile, combines beauty of design and surroundings with an unmistakable air of permanence. To the casual observer, it is a monument of stone and brick, but, behind this outer casing stands the sturdy framework of *Tennessee Structural Steel*, adding the essential elements of safety, strength, and durability.

**TENNESSEE COAL, IRON & RAILROAD COMPANY**

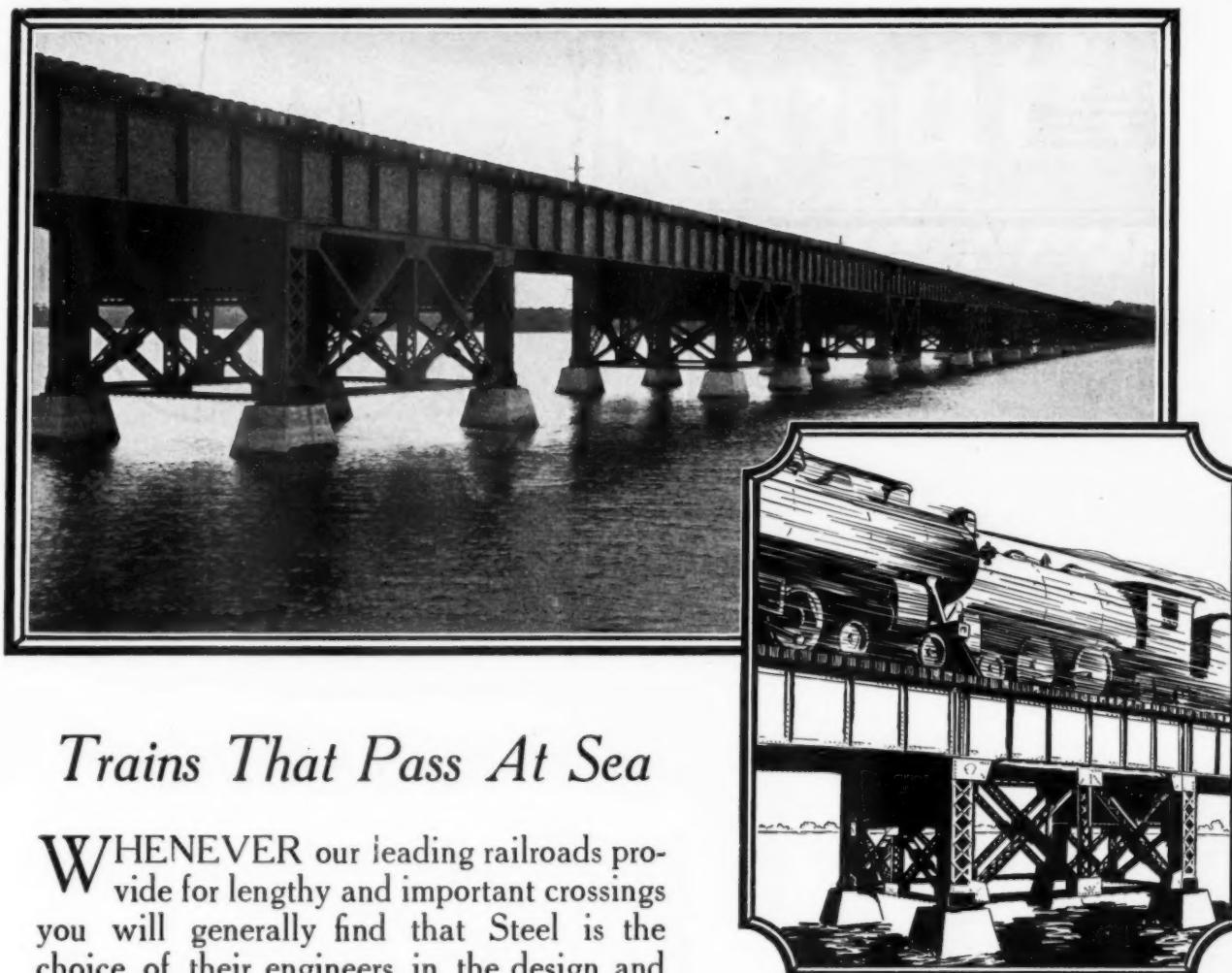
General Offices: Brown-Marx Building  
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SUBSIDIARY OF UNITED STATES STEEL CORPORATION



**TENNESSEE**  
**Structural Steel**





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THERE is a definiteness about Steel, from its inherent qualities and by reason of the positive control of manufacture and inspection in the modern fabricating plant, that removes all uncertainty and question as to the strength and life of the bridge.

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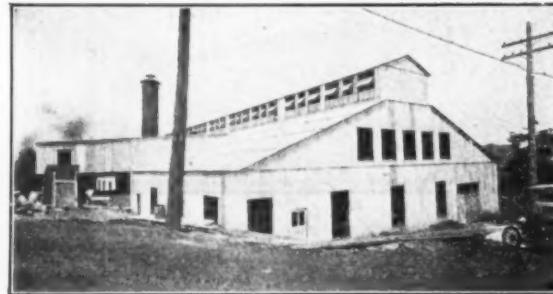
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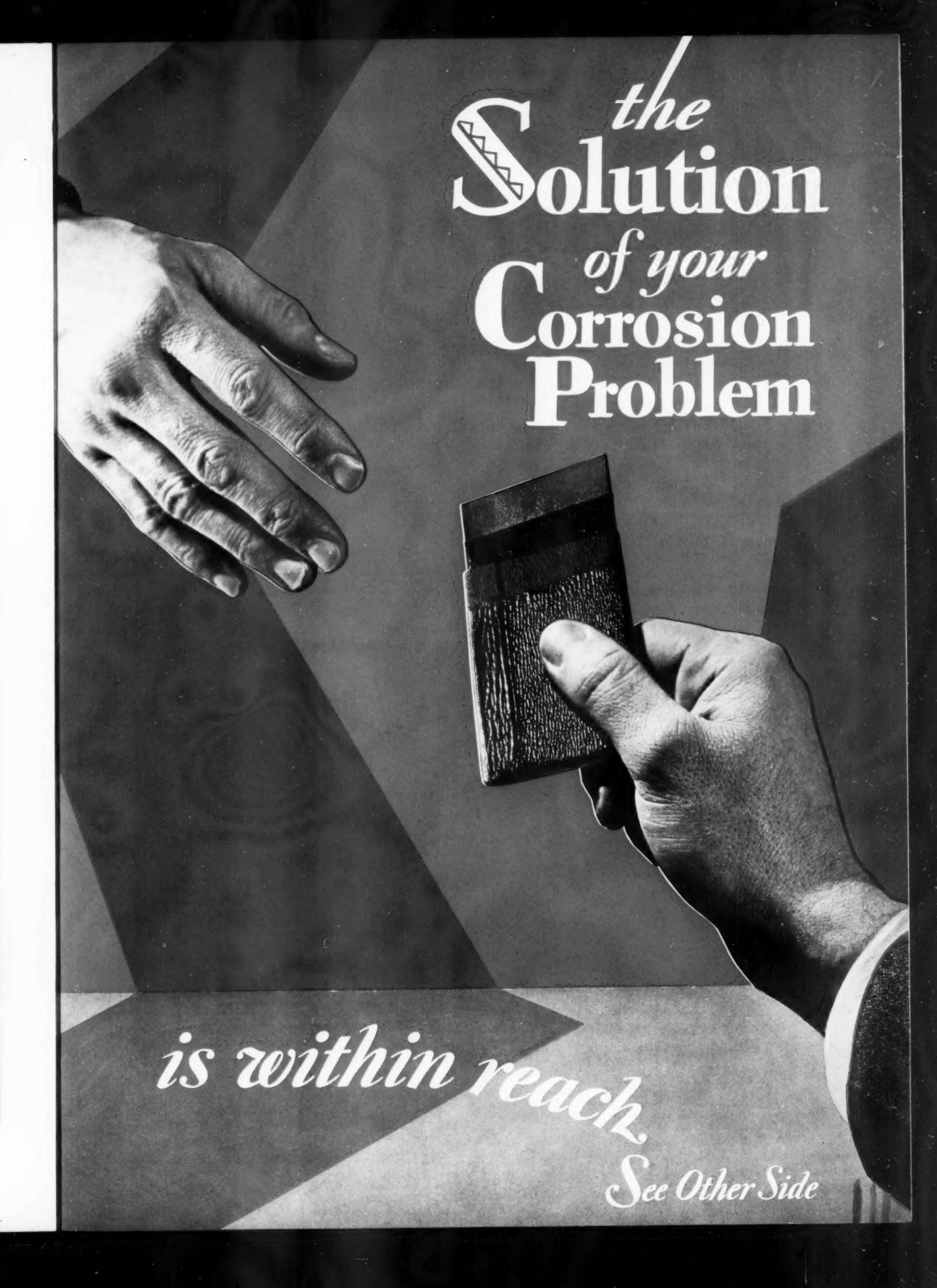
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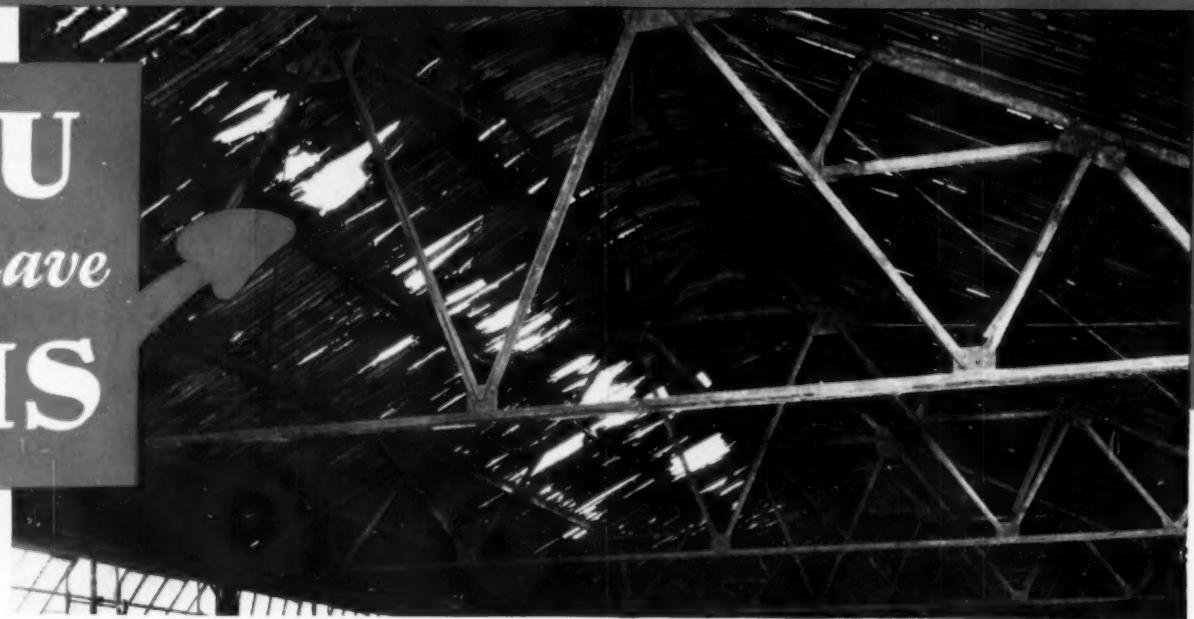


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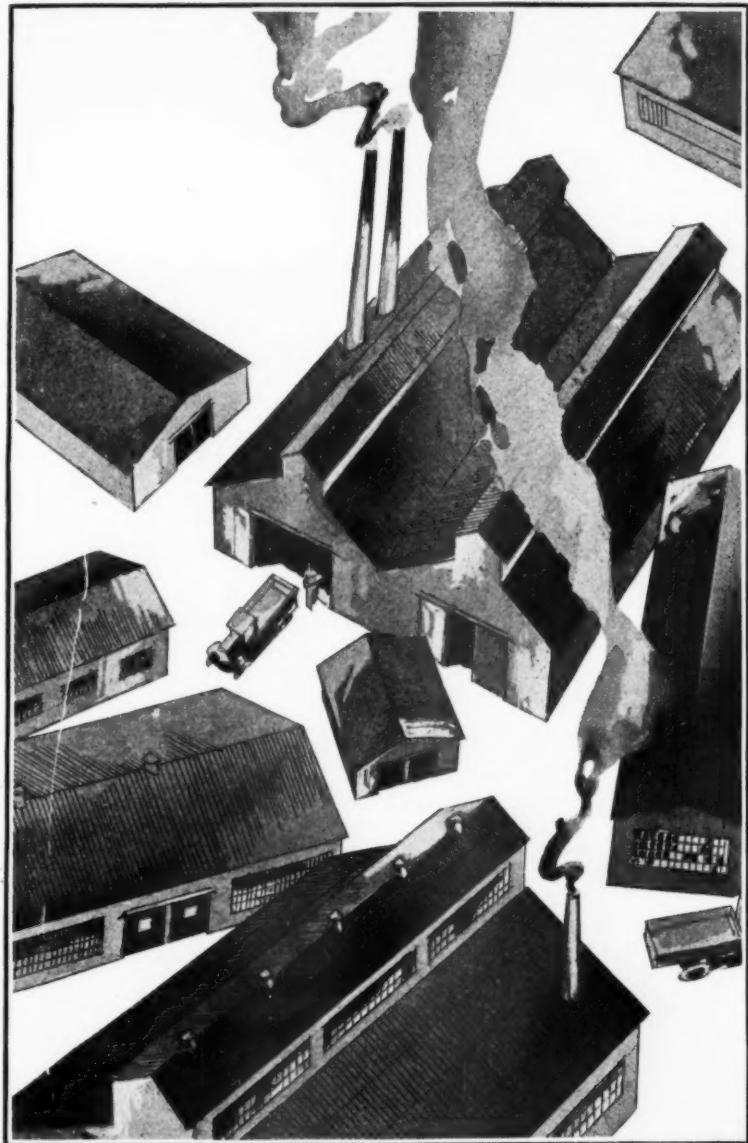
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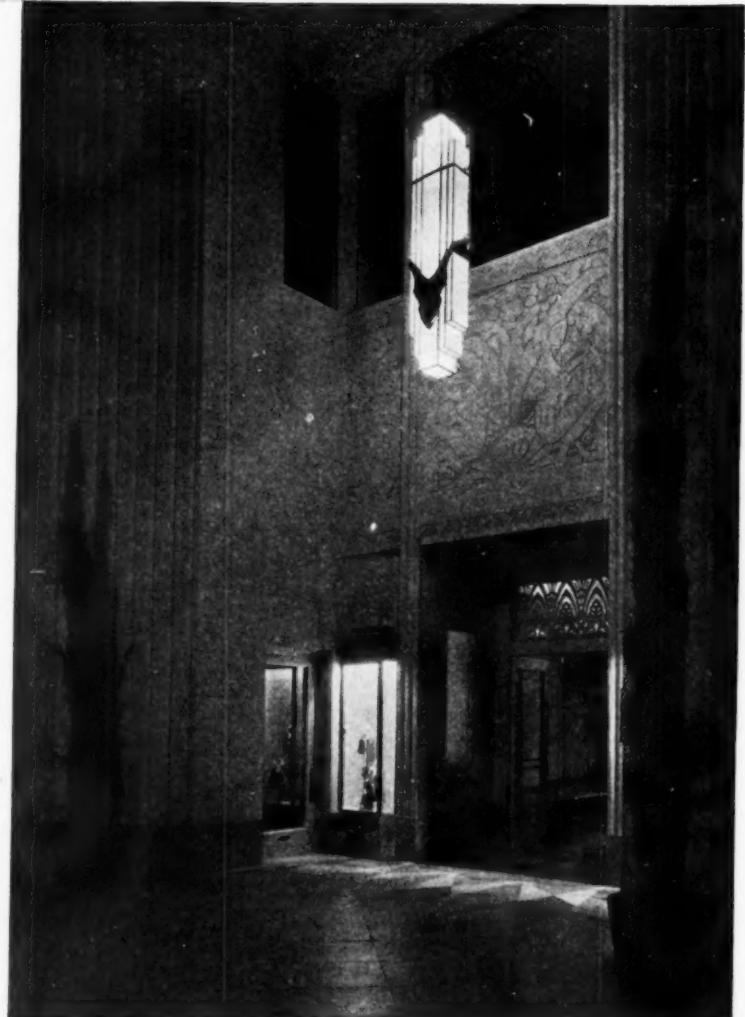


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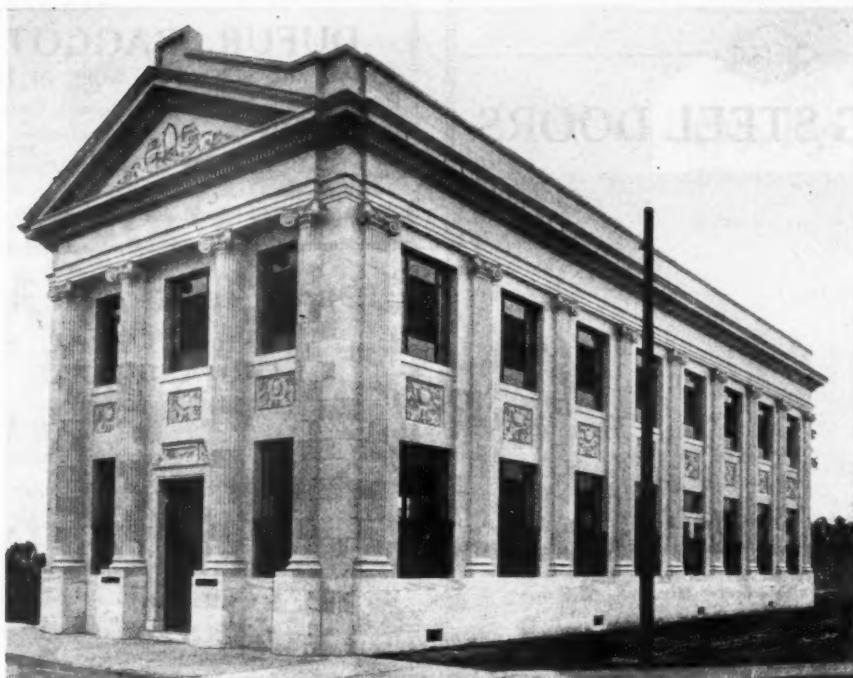
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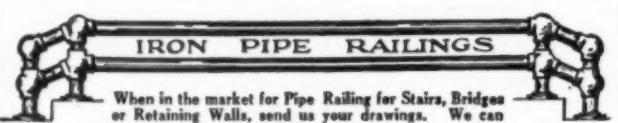
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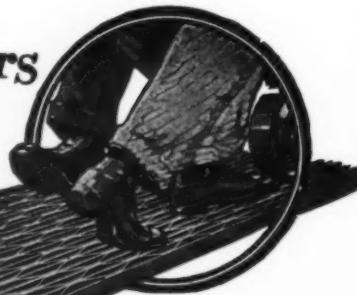
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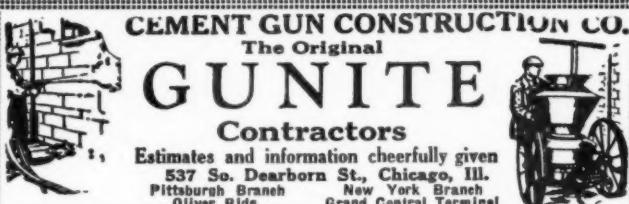
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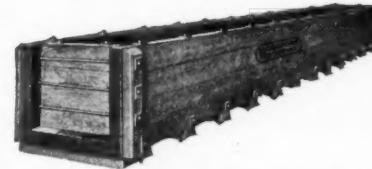
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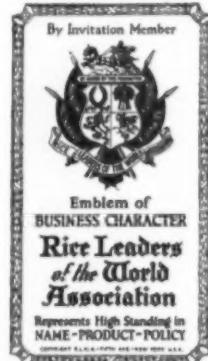
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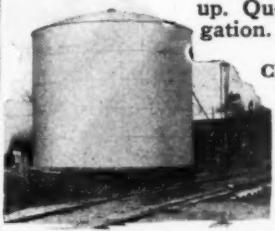
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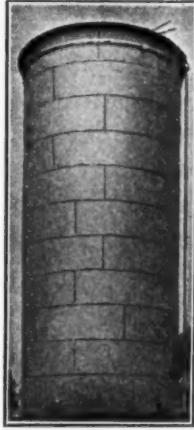
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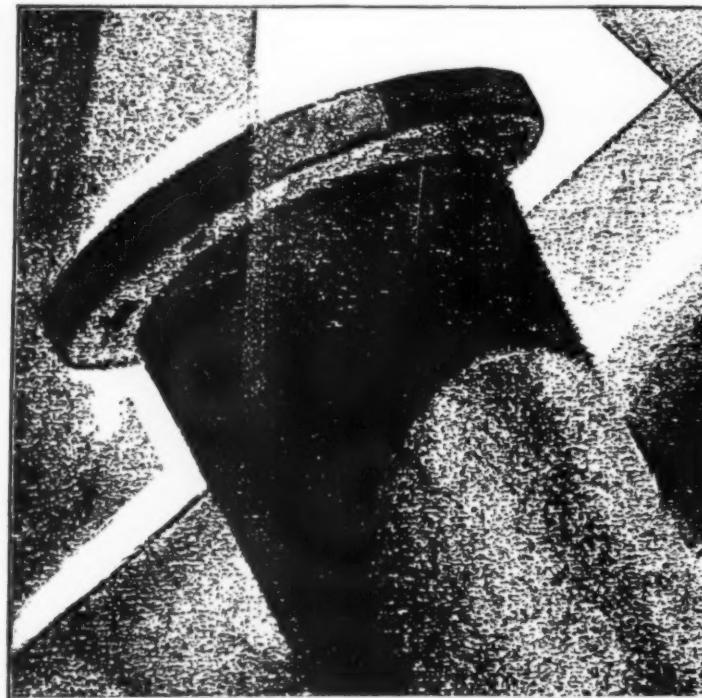


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For additional information write to the Cast Iron Pipe Research Association, Thomas F. Wolfe, Research Engineer, Peoples Gas Building, Chicago.

The Cast Iron Pipe Research Association is a service organization of leading pipe founders, formed to promote the scientific improvement and proper use of Cast Iron Pipe. Pipe bearing the Association "Q-check" mark may be obtained from the following: Alabama Pipe Company, Anniston, Ala.; American Cast Iron Pipe Company, Birmingham, Ala.; James B. Clow & Sons, 219 N. Talman Avenue, Chicago, Ill.; Donaldson Iron Company, Emmaus, Pa.; Glasmorgan Pipe and Foundry Company, Lynchburg, Va.; Lynchburg Foundry Company, Lynchburg, Va.; National Cast Iron Pipe Co., Birmingham, Ala.; United States Pipe and Foundry Co., Burlington, N. J.; Warren Foundry & Pipe Co., 11 Broadway, New York.



*The "Q-check" symbol shown above has been adopted as the trade mark of The Cast Iron Pipe Research Association.*

# CAST IRON PIPE

*Ductility Increases  
the Usefulness of  
Steel Pipe*

Republic Steel Pipe adapts itself to installations of a character employing bending, because it is sufficiently ductile without weakening its internal resistant strength.

Where the pipe is to be used for special bending, flanging, swaging, coiling or other severe forming operations, a special pipe for such purposes is determined in Republic Testing Laboratories . . . and the unusually high degree of ductility necessary, is assured by definite manufacturing processes controlled from ore to finished pipe. Thus proper ductility or "give in working" combines with "strength" in promoting more satisfactory, more lasting service.

**REPUBLIC**  
IRON & STEEL CO., YOUNGSTOWN, O.  
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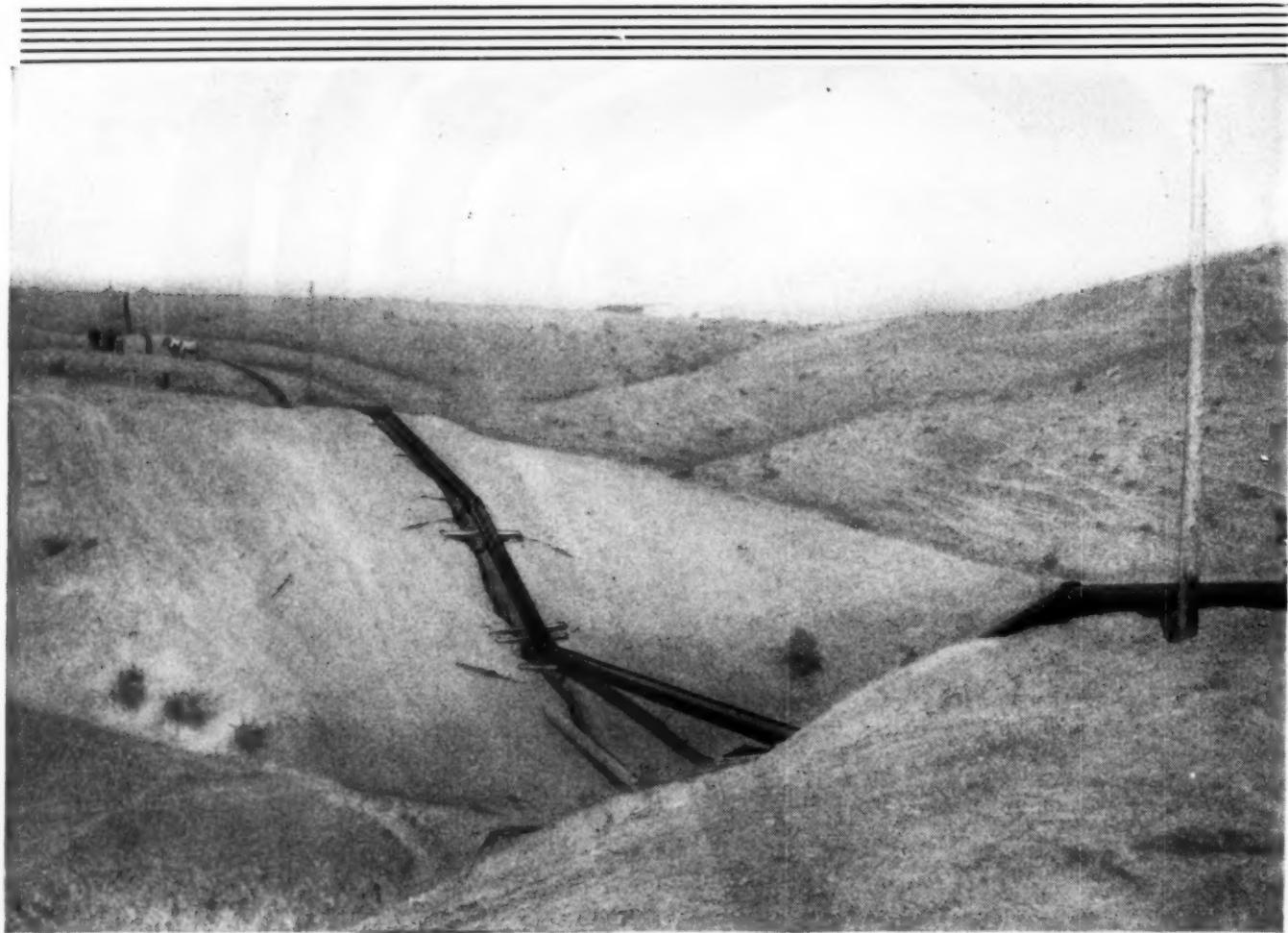


# PIPE LAYER'S HEAVEN

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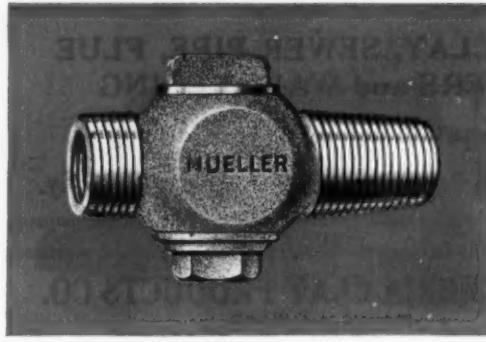


(In the language of the pipe liner, any country that is especially easy to go through with a pipe line is known as "pipe layer's heaven.")

An old timer told us that with SMITHWelded Line Pipe and SMITHWeld Bell and Spigot and Expansion Bending Joints, all kinds of country become "PIPE LAYER'S HEAVEN."

A. O. SMITH CORPORATION, *General Offices*: Milwaukee, Wisconsin  
*OIL AND GAS FIELD PRODUCTS DIVISION*  
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# SMITHWELDED GAS LINE PIPE



MUELLER Corporation Stop G-10001

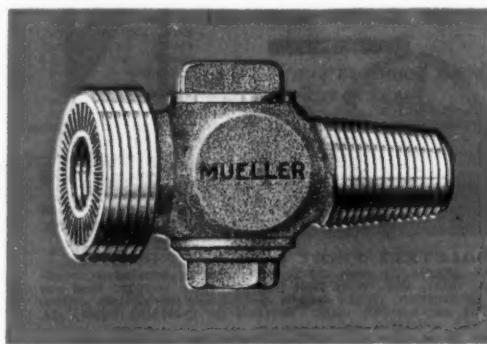
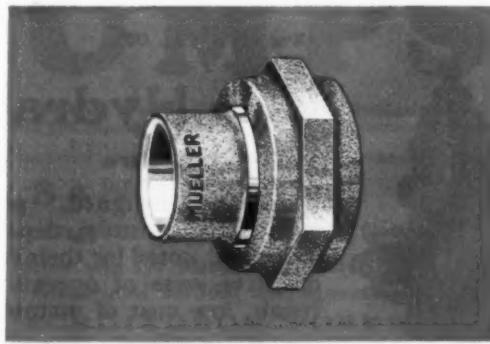
## Service you can rely upon— Each MUELLER Stop is built as a unit!

THE key is ground into its own body—special grinding compounds and methods insure a smooth, leak-proof surface. Key and stop are never made separately and then assembled! Add to this the fact that all MUELLER bronze ware is made only from virgin metal and you will realize why better than 85% of water works specify MUELLER by name.

The design shown above is for wipe joints. The one below, for lead flange joints which provide a perfect connec-

tion without the inconvenience and expense of wiping.

All MUELLER bronze ware is produced to laboratory control of copper content—insuring a non-porous texture of great fineness. Let us send you full particulars—MUELLER quality means lower costs in the long run. MUELLER CO., (Established 1857) Decatur, Illinois. Branches: New York, Atlanta, Dallas, San Francisco, Los Angeles. Canadian Factory: MUELLER, Limited, Sarnia.



MUELLER Corporation Stop G-10002

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CORPORATION STOPS for MUELLER Tapping Machines

**FIRE CLAY, SEWER PIPE, FLUE LINERS and WALL COPING**

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**THE CAMBRIA CLAY PRODUCTS CO.**

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FACE BRICK - FIRE BRICK - FIRE CLAY  
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Wall Coping, Drain Tile, Flue Lining, Chimney Tops, Hollow Tile, Fire Proofing, Vitrified Brick, Fire Brick

BANNON'S PATENT LIDDED PIPE FOR STEAM CONDUITS

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Graybar Bldg., 43rd St. and Lexington Ave., New York, N. Y.  
Chicago Birmingham Dallas San Francisco

no packing no calking no bell holes

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GENERAL FOUNDERS AND MACHINISTS  
LYNCHBURG, VA.

One-Fifth  
The  
Weight of  
Cast Iron  
Pipe

ROOT SPIRAL RIVETED PIPE

One-Third  
The  
Weight of  
Wrought  
Pipe

AN ABSOLUTELY TIGHT DURABLE PIPE  
The lap riveted seam repeats its cycle every twelve inches, forming a broad stiffening rib of great value, and makes Root pipe one-third stronger than any other type of pipe construction. Light weight and simple connections reduce transportation, handling and erection costs. Suitable for conveying water, air, gas, exhaust steam and powdered coal.

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Pipe Specialists Continuously Since 1867. Sales Office: Woolworth Bldg., N. Y.

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- AND FITTINGS -**

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SALES OFFICES IN PRINCIPAL CITIES

The "Wonder" Portable Cold Pipe Bending Machine

Lead the world in sales and performance

Cost less to make Sell for less

The cost of bending 1" pipe, 5c

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3" pipe, 20c

4" pipe, 40c

6" pipe, 60c to \$1.00

8" pipe, \$1.00 to \$1.50

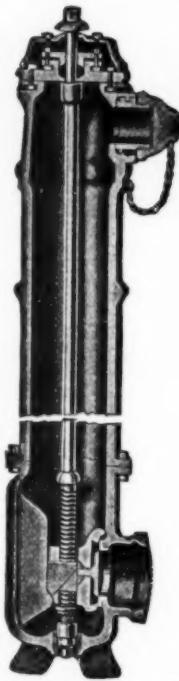
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Ludlow Hydrants cannot clog. All working parts are protected from injury by gritty or cutting substances passing through the hydrant. All parts can be removed without digging up the hydrant. Gate-locking device prevents street from being flooded should the standpipe be broken.

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**MATHEWS**

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Correctly designed, properly constructed, sturdy, dependable hydrants, noted for their fewness of parts, ease of operation and repair, low cost of maintenance.

The outside casing and an easily installed

**EXTENSION SECTION**

make them unusually adaptable to changing grades and conditions.

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IRON WORKS  
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**SELF-OILING-WEATHERPROOF**

This is the Pump YOU have been hoping for --- Foolproof --- Trouble-proof

Compact Sturdy Efficient Adaptable

BULLETIN — 36

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**RoTURBO CENTRIFUGAL PUMPS**

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**SAND PUMPS**

A wide range of types in sizes 4" to 15"  
For belt drive and for direct connection to motor  
Illustrated booklet on request

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**DEEP WELL PUMPS**

Single and Double Stroke Any Drive—

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Combined units consisting of Allis-Chalmers Centrifugal Pump and drive selected by our engineers have so frequently been the means of considerable savings that you should benefit by our experience wherever you have any pumping problems under consideration.

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Safety and low cost of operation, uniform service without attention, increased capacity over comparative sizes of old type pumps, have popularized Myers Self-Oiling Power Pumps in domestic, agricultural, commercial and industrial fields to such an extent that we now build them in twelve sizes to meet installation, motive and volume requirements. If interested in power pumps for home, farm, mill, mine or factory, investigate MYERS Self-Oiling Pumps. Catalog and information on request.

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For Contractors, Mines, Quarries, Coffer dams, and all Rough and Ready Service. Immediate Deliveries

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**READY  
CONVERTIBLE  
TO  
CRANE  
DRAGLINE  
SKIMMER  
OR  
HOE**



HERE is a half-yard excavator that will do a bigger job than you ordinarily expect from a half-yard machine.

The reason is simple. The 300-A is built like the larger units in the P & H line. It has the famous P & H unit cast-steel construction . . . all main frames cast in one piece . . . longer life and perfect alignment. Alloy steels are generously employed. It is the heaviest half-yard shovel built, weighing 47,200 lbs.

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A COMPLETE LINE

**$\frac{1}{2}$  cu. yd. to  $3\frac{1}{2}$  cu. yds.**

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REPLACE DENATURED  
ALCOHOL WITH THE  
LOWER PRICED PURE

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We will be glad to cooperate on all  
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Telephone calls between distant cities are increasing sales for all types of concerns. A coal wholesaler of Abilene, Kansas, sells 90% of his tonnage by telephone, and increases his sales each year. During the spring storage-taking period, he reaches out by telephone and sells from

twenty to one hundred carloads of coal a day.

Business by telephone is the growing economy today. A Decker, Indiana, fruit company distributes 80% of its volume by telephone. An oil company of New York, Pennsylvania and Ohio does 95% of its annual business—\$3,000,000—over the telephone.

What percentage could you add to your business by telephone contacts? Ask your local Bell Business Office to help you survey your needs. You may be overlooking telephone opportunities for increased business. Bell Telephone Service is . . . Convenient . . . Economical . . . Universal.



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## MANUFACTURERS RECORD

RICHARD H. EDMONDS, Editor

### MAIN OFFICE

Manufacturers Record Building,  
Commerce and Water Streets,  
Baltimore, Md.

Published Every Thursday

by the

MANUFACTURERS RECORD  
PUBLISHING CO.

### BRANCH OFFICES

Chicago—11 S. LaSalle St.  
New York—901 Singer Bldg.

Subscription Rates: \$6.50 a year (in advance); six months, \$3.50; three months, \$2.00 to United States, Mexico, Cuba, Porto Rico, Hawaii and the Philippines. For Canada add postage \$1.00 a year. For other foreign countries add postage \$3.50 a year.

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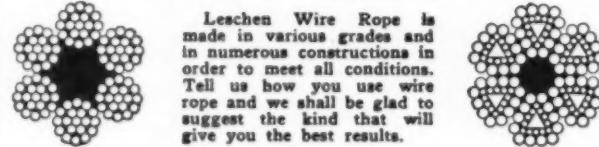


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## EXONENT OF AMERICA

Devoted to the Upbuilding of the Nation Through the Development  
of the South and Southwest as the Nation's Greatest Material Asset

Vol. XCVII No. 13  
Weekly

BALTIMORE, MARCH 27, 1930

Single Copies, 20 Cents.  
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## Expansion in the South As Exemplified in Natural Gas Developments

PERHAPS the most remarkable phase of industrial development of the country at the present time, but pre-eminently relating to the South, is the development of the natural gas industry. From West Virginia to Texas movements are under way involving in the aggregate hundreds of millions of dollars for piping natural gas to different localities, and it looks as though a network of gas lines would be extended practically over the South to an extent equal at least to oil pipe lines which have been such a dominant feature in transportation of oil of late years.

It is just one more all-compelling illustration of the Southward trend of hundreds of millions of capital from other sections. Every development of this kind means a concentration of thought and capital by the men who are developing these pipe lines upon further industrial development in the South to create a full demand for all the natural gas for which piping preparations are being made. There must of necessity come a very active competition between the electric power companies and the natural gas companies in friendly rivalry so as to see which one can do most for the industrial development of the South. New centers of industry, and the expansion of existing centers will be the natural outcome of this friendly contest in which each interest will endeavor to do its utmost to set forth the resources and possibilities of the South.

Under such conditions, with the benefit to the South of an abundant supply of natural gas and electric power, there will naturally follow great industrial activity, stimulated by the facilities for cheap and abundant power.

One phase of the increasing use of gas for industrial purposes which should not be overlooked is the nation-wide creative advertising campaign which has been conducted by the American Gas Association to foster "consumer acceptance" of gas. Through the educational appeal of the advertisements appearing in the MANUFACTURERS RECORD and other publications, pointing out to the public the latest developments in gas-burning equipment and inviting prospective users to place their heating problems before the engineers of local gas companies, interest has been aroused which resulted in increased demand for gas for heating purposes. Likewise, developments in the financing and building of pipe lines, and in the welding of pipe joints have been factors in the rapid expansion of these lines.

Indicative of the magnitude of what is being done in natural gas development we give a list of the movements of the last week or ten days, and a few further facts in regard to new enterprises projected during that time in other lines of activity throughout the South.

Lines are now proposed to the West from Oklahoma and Texas fields. A 900-mile line is projected from Texas fields to Chicago. Progress is being made in organization of a company to build lines to important industrial centers in the East from West Virginia fields.

Duquesne Gas Corporation will be organized by well known interests as a holding company to take over natural gas properties totaling 40,000 acres in Western Pennsylvania and West Virginia.

Electric Bond & Share Company announced plans during the week for purchase of Texas and Louisiana natural gas properties and the formation of a holding company.

Appalachian Gas Corporation offered \$2,500,000 debentures to provide for extensions and developments and for the acquisition of additional properties.

The Moody-Seagraves interests, Houston, are reported to have made tentative plans for a 900-mile pipeline from Stevens and Morton counties, Kansas, and from Texas County, Oklahoma, to eastern Nebraska and Iowa.

Consolidated Gas, Electric Light & Power Co., Baltimore, proposes a 12-mile extension to the communities of Riderwood, Ruxton and Lutherville and an 18-mile extension to Reisters-town and vicinity.

Oklahoma Portland Cement Co. plans a 12-mile 12-inch natural gas line from Steadman to its plant at Ada, Oklahoma.

Southern Natural Gas Corp., Birmingham, has awarded contract for 60 miles of six-inch welded steel pipe for branch lines to serve Meridian, Miss., and nearby points. It will expend several million dollars this year for extensions.

New Kanawha Power Co. has awarded contracts for a hydro-electric project on New River, West Virginia, necessitating the building of a three-mile tunnel and erection of a dam and power house at a combined cost of about \$8,000,000.

Appalachian Electric Power Co., Bluefield, W. Va., is pushing plans for construction of a \$12,000,000 hydro-electric project on Little River and New River near Radford, Va.

Du Pont Cellophane Co., New York, will, according to press reports, undertake expansion of its big plant at Old Hickory near Nashville, Tenn., said to involve the expenditure of \$2,000,000.

The Long Lines Department of the American Telephone & Telegraph Co., New York, announces its 1930 construction activities will involve the expenditure of \$106,000,000 and much of this work will be undertaken in the South and Southwest.

Tampa, Fla., will soon receive bids for \$750,000 airport bonds.

Arkansas Portland Cement Co., Okay, Ark., has started

work on plant improvements to increase capacity to 2750 barrels daily.

Mathieson Alkali Works, Inc., New York, is reported to plan an expenditure of \$2,000,000 at its Saltville, Va., plant.

United Railways and Electric Co., Baltimore, has ordered 150 new street cars and will rebuild 300 used cars at a total estimated cost of over \$3,000,000. It also has purchased 12 double-decked buses.

Work has started on the \$4,600,000 irrigation project of Maverick County Water Control and Improvement District No. 1, in Texas, calling for the building of 90 miles of main canal, 300 miles of laterals for reclaiming 60,000 acres.

The United States Engineer Corps is ready to proceed with \$35,000,000 of flood control works this year along the Mississippi River and its tributaries, from the mouth of the river to Cape Girardeau, Mo. Projects in this program are not involved in the controversy over merits of the Jadwin plan.

Hidalgo County Water Control and Improvement District No. 12, Edinburg, Texas, has voted \$5,500,000 bonds for an irrigation project to serve 90,000 acres.

The State of North Carolina receives bids in April for \$8,920,000 bonds to provide \$2,000,000 for the Great Smoky Mountains National Park, \$2,000,000 for World War Veterans fund, \$550,000 for Chowan River bridge, \$1,400,000 for school buildings and \$2,970,000 for permanent improvements authorized by the legislatures of 1927 and 1929.

Brazos River Harbor Navigation District, Angleton, Tex., is discussing plans for a \$4,500,000 bond issue.

City Commission at Birmingham, Ala., has sold \$2,500,000 bonds to provide \$1,000,000 for park facilities, \$1,000,000 for drainage work and \$500,000 for fire department.

Charlotte, N. C., is considering plans for an election in April on \$3,000,000 bonds for general municipal improvements.

Louisiana Highway Commission is considering plans for financing and constructing eight toll bridges on important highways in various sections of the state, estimated to involve an expenditure of \$6,250,000.

Parkersburg, W. Va., proposes to expend \$500,000 for streets, sewers, police and fire station equipment.

Houston, Tex., has sold \$2,170,000 bonds to finance street and general improvements.

Dallas County, Tex., has sold \$3,000,000 road bonds.

Pecos County, Tex., is considering plans for \$500,000 road improvements.

Custer County, Okla., sold \$900,000 road bonds.

Republic National Bank, Dallas, Tex., awarded contracts for a \$1,000,000 annex 18-stories high.

Contracts have been awarded for the 300-room Robert E. Lee Hotel at Jackson, Miss., estimated to cost over \$700,000.

Contracts have been awarded for 40 sets of officers' quarters at the U. S. Infantry School, Fort Benning, Ga., estimated to cost \$500,000.

Alabama Polytechnic Institute, Auburn, Ala., has let contracts for new buildings to cost more than \$750,000.

The Board of Education, St. Louis, receives bids April 2 for \$950,000 vocational high school, and is having plans prepared for another structure to cost \$500,000.

Plans are being prepared for Miss Esther O'Brien, owner of the Jerome Hotel, Columbia, S. C., for a \$750,000, 14-story, 250-room structure.

Bids will be received May 2 for Marine Hospital facilities at Galveston, Tex., to involve expenditure of \$750,000.

Jefferson County, Tex., has sold \$1,000,000 bonds to finance building a new courthouse in Beaumont, Texas.

Work has started on the \$850,000 Schloss Memorial Jewish Hospital in Kansas City, Mo.

Work will start soon on a \$500,000 terminal warehouse in Oklahoma City for the Oklahoma Warehouse Co.

## WORKING FOR A TARIFF ON SOUTHERN PRODUCTS

**H**ON. JOS. R. GRUNDY, United States Senator, writing to the MANUFACTURERS RECORD under date of March 17, said:

"I have your very interesting letter of the 14th and have carefully noted the facts set forth therein. It is quite true that the wide differentials in wage scales as between this country and India do exist and should constitute a *prima facie* case for the protective duties that have been sought for both the commodities covered in your communication."

The letter which called forth this reply from Senator Grundy was from the editor of the MANUFACTURERS RECORD, and read as follows:

"Reference to pig iron in the tariff discussion a few days ago suggests that while you are doubtless entirely familiar with the matter of wages paid in iron work in India the following facts may be of interest.

"As you know, there is an immense iron and steel plant in India managed by Charles E. Perin, a leading American engineer. Some years ago I heard Mr. Perin in an address before the American Iron and Steel Institute say that he was employing in the India plant about 8000 hands, and that the average rate of wages, including skilled labor, was between 7c and 8c a day.

"Three years ago at a meeting in this country of the Foreign Trade Council, Mr. Perin made an address in which he stated that the rate of wages in India had risen to an average of about 10c a day for the people employed in his plant, but that one of the chief owners had complained that these wages were entirely too high. In that address Mr. Perin said that a large number of these employees were women, doing the roughest and hardest work around the iron and steel and coke plant, and that among these women there were over 400 who were grandmothers before they were 24 years of age.

"That is the rate of wages which many of our American people want the laborers of this country to compete with. A good deal of that iron is coming into this country all the way from the East down to Texas. A few years ago I had a letter from a pig iron consuming plant in Virginia which reported that it had purchased a large quantity of India pig iron delivered at its plant at \$2.00 a ton less than they could buy Virginia made iron. Virginia was once a great iron producing state, but very few of its furnaces are in operation these days; and how could they possibly operate in competition with iron made in India with wages from 8c to 10c a day?

"Another illustration of what American manufacturers have to compete with was shown when the Underwood tariff bill put jute products on the free list. The great jute manufacturing concerns in this country dismantled their plants and shipped the machinery to Calcutta, and one of them in a public statement said that it was doing so because it could secure wages at 16c to 17c a day for jute mills, but that these wages were much higher than formerly and a lower rate of wages was expected. The result has been that this country is now importing about 1,000,000,000 yards of jute a year which largely take the place of American cotton, thus striking a very hard blow at the prosperity of our cotton growers—and their prosperity is essential to national prosperity.

"But you are, of course, familiar with these conditions by reason of your wide knowledge of the whole protective tariff question. However, I have thought it might not be out of place to give you these specific facts."

The facts set forth in the letter to Senator Grundy about wages in the iron and steel plants of India, formerly averaging 7c to 8c a day, including skilled labor, but later advanced to about 10c a day, and the price for labor in the jute mills of India, should surely stir the people of the whole country, but pre-eminently of the South, to this situation.

Since jute was put on the free list under the Underwood tariff bill there has been such an enormous increase in importations of jute products that we are now bringing into this country over 1,000,000,000 yards a year, reducing the demand for cotton and greatly injuring the whole cotton industry.

Is it not about time for the people of the South to awake fully to this situation and demand protection upon its pig iron, its cotton as against jute, and the many other products which ought to be amply protected?

It is interesting in this connection to note the activity of United States Senator Simmons of North Carolina, and Representative Chas. A. Jonas of that state, in their fight for a duty on mica. Mr. Jonas in an interview for the Charlotte Observer stated that a tariff on mica would prove an unusually significant aid to one of the major industries of the mountain sections of five or six Western North Carolina counties. Since he has been in Congress he has vigorously championed a tariff on this mica schedule. Mr. Jonas said:

"While the increases secured are not all that was desired by the North Carolina industry, or that should have been secured, it is felt that they will be of substantial benefit to our people."

And now if Senator Simmons and Congressman Jonas, and all other Southern Democrats who have been seeking a protective duty on individual products of their state, will be wise enough to co-operate in securing a tariff on all the products of the South and of the country, they will be rendering a great service and helping to increase the prosperity of the South and of the nation.

### EXORBITANT INTEREST AND CREDIT CHARGES AGAINST TENANT FARMERS

F. H. JETER sends to the MANUFACTURERS RECORD a report of the investigation by the Department of Agricultural Economics of the State College of North Carolina, to the effect that store credit costs tenant farmers, according to an investigation made in four counties in North Carolina, 44 per cent, and all credit advances average 38.6 per cent.

This investigation of farms in these four counties, made in 1928 under direction of Dr. G. W. Forster, showed that they were operated by 588 croppers and that 230 were selected at random and their operations carefully noted. On the whole the farms were better managed and operated than most, but not greatly so.

Dr. Forster's report said:

"From the studies it was found that the tenant's cash income was \$766. The value of the cropper's family labor was \$271, leaving him \$495 for his annual wage. But in addition to receiving an average of \$766 in cash, the cropper got additional living from the farm to the value of \$170. This made a total of \$936 for the tenant and his family for the year.

"The income varied somewhat according to the size of the farm operated. For instance, 90 croppers who operated less than 20 acres of land had a cash income of \$543, while 108 who operated from 20 to 40 acres had a cash income of \$808 and 32 who cultivated over 40 acres had a cash income of \$1253.

"The total advances for cash and supplies for the counties were: Wayne, \$318; Lenoir, \$360; Edgecombe, \$489 and Pitt, \$388, or an average of \$408 per cropper. Total interest and time charges paid on these cash advances and supplies by the 588 croppers was \$60 in Wayne, \$71 in Lenoir, \$77 in Edgecombe and \$98 in Pitt, or an average of \$78. This makes a flat charge of 19.1 per cent and a per annum charge of 38.6 per cent for all credit advances."

### PRESIDENT HOOVER ASKED TO AID IN FURTHER DEVELOPMENT OF RIVERS AND HARBORS

CHAIRMAN DEMPSEY of the House Rivers and Harbors Committee, Representative Hull of Illinois, a committee member, and Wm. R. Dawes, president of the Mississippi River Improvement Association, have recently called President Hoover's attention to a rapid increase in tonnage which in their opinion justifies the President's hearty co-operation in providing increased harbor and river facilities for this water-borne traffic.

The 5-year gain in traffic in New York harbor, for instance, as stated by Mr. Dempsey, was from 38,651,000 tons to 51,887,000 tons. Also there was an increase of from 30,000,000 to 50,000,000 tons in the New York and New Jersey channel. Port Jefferson harbor had increased its traffic from 827,000 tons to 2,763,000 tons.

Other evidences of rapid increase in water-borne traffic were pointed out, including an increase in Monongahela River commerce of from 14,407,000 tons in 1922 to 27,412,000 tons in 1928. Tonnage on the Great Lakes grew from 109,831,000 tons in 1924 to 149,706,000 tons in 1928. Traffic on the Pacific Coast developed almost as rapidly as in the East.

Emphasizing some of the specific needs for further improvements in order to handle increased traffic, this House committee submitted to President Hoover the following statement of increased tonnages on inland waterways:

Delaware River, above Philadelphia—3,000,000 to 5,000,000 tons.

Delaware River at Camden—774,000 to 1,207,000 tons.

Wilmington Harbor, Delaware—551,000 to 803,000 tons.

Baltimore Harbor, Maryland—Commerce in 1928, 17,000,000 tons.

James River, Virginia—789,000 to 1,125,000 tons.

Norfolk Harbor, Virginia—Commerce in 1928, 14,915,000 tons.

Charleston Harbor, South Carolina—1,882,000 to 2,782,000 tons.

Savannah Harbor, Georgia—Commerce in 1928, 2,308,000 tons.

St. Johns River, Florida, below Jacksonville—Commerce in 1928, 3,134,000 tons.

Tampa Harbor, Florida—Commerce in 1928, 3,285,000 tons.

Miami Harbor, Florida—105,000 to 812,000 tons.

Mobile Harbor, Alabama—2,694,000 to 4,165,000 tons.

Houston Ship Channel, Texas—7,094,000 to 12,981,000 tons.

Galveston Channel, Texas—Commerce in 1928, 5,114,000 tons.

Port Aransas, Texas—176,000 to 1,321,000 tons.

Mississippi River at Baton Rouge—4,638,000 to 6,176,000 tons.

Mississippi River, Ohio River to Illinois River—738,728 to 1,430,000 tons.

Mississippi River between Wisconsin River and Illinois River—769,100 to 1,034,900 tons.

Kanawha River, West Virginia—901,000 to 1,595,000 tons.

Illinois River, tonnage available as soon as waterway is completed, 15,000,000 tons.

In this country, to too great an extent, we have been inclined not to look ahead and forecast the rapidity of its development and the need for increased facilities on land and water. A story we have often told, but which will bear repetition, is to the effect that when President Cassatt years ago decided to duplicate the entire facilities of the Pennsylvania Railroad he was vigorously criticized by conservative bankers, and the statement was made in Philadelphia papers that there was some thought that he had really become unbalanced mentally. But he carried through his extension, and before his death he said the expansion he had planned for 25 years of growth had proved sufficient only for ten years.

The almost boundless resources of this country, the activity of 120,000,000 people, the advance in our foreign and domestic trade, all bring about a tremendous stimulation of business

and a far higher rate of industrial growth than of population increase.

The suggestion in regard to President Hoover's co-operation in the work of planning for extension of harbor and river facilities should command his favorable attention and the hearty co-operation of Congress.

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**A GREAT FORESTRY DEVELOPMENT  
INAUGURATED YEARS AGO BY  
GEORGE W. VANDERBILT  
AT ASHEVILLE**

THE opening to the public of Biltmore House at Asheville, the wonderful palace built by George Vanderbilt, has been heralded by the Asheville people as of peculiar interest to the country. This event recalls some interesting facts in regard to the building of that house as published many years ago, but which Carolina papers seem to have overlooked.

It was then said that George W. Vanderbilt, 22 years of age, asked his physicians to select for him a location in which he might build a great home in what they regarded as the best climate for possibly weak lungs. Why Mr. Vanderbilt made this request we do not know. We only tell the story as it was then widely reported. It was said that he expected they would select some point on the Mediterranean, and that he was surprised when they selected the Asheville section in which to build his great house.

He purchased between 125,000 and 150,000 acres of land, much of it in forest, brought to this country a great library on forestry from Europe, employed a forester to carry out a plan of forestry work; and so deeply interested was he in all this work that a correspondent of the MANUFACTURERS RECORD wrote that it was the belief of those connected with the building of the enterprise that as Mr. Vanderbilt was not then married his plan was to will at his death his house and estate for a School of Forestry. When that article was published in the MANUFACTURERS RECORD, a relative of Mr. Vanderbilt, who had the supervision of the construction of the house in hand, wrote this paper that he was glad our correspondent had so rightly divined Mr. Vanderbilt's purpose.

However, later on Mr. Vanderbilt married, established his home there, and began the development of a 10,000 acre park and farm. For years the public has had free access, on certain days of the week, to the park and to the farm, but not to the immediate grounds surrounding the residence, or the residence itself. Mr. Vanderbilt's daughter, who inherited this princely estate, and her husband have now announced that Biltmore House will be thrown open to public inspection. Whether this will be for only a few days, or a few hours in the week, or what will be the conditions, we do not know; but the marvelous location of Biltmore House, its superb beauty, its wonderful library, its swimming pool and other attractions will unquestionably draw many thousands of visitors. It is to be hoped that these visitors will be men and women of such character and such carefulness in viewing the whole situation that they will do nothing to cause the owners of the property to close the house to public admission.

Mr. Vanderbilt we believe was about the first leading man in America to take an active part in developing a School of Forestry and in handling the 125,000 acres or more of forest land on a scientific basis as a lesson to the country at large. In this respect, as in others, he built for himself a monument and he gave an impetus to forestry which has continued ever since to increase.

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Truthfulness in work is as much demanded as truthfulness in speech.—*Hugo Black*.

**BROAD-GAUGED CONSTRUCTIVE WORK**

"INDUSTRY Prospers in Georgia" is the key-note of a series of advertisements the Georgia Power Company is running in the MANUFACTURERS RECORD and other papers in an effort to attract industrial developments to the territory served by its lines.

During 1929, states one advertisement, "fourteen great new industries have been built, or definitely scheduled, along the lines of this company. And six of the established major plants have expanded. These programs represent an investment of \$19,150,000 and they will provide employment for 7,925 Georgians, with total new annual payrolls of \$6,010,000."

More and more payrolls is the crying need of Georgia and of all the South, and the Georgia Power Company, like the other power companies and the railways, is doing good work in advertising the industries of the state. For not only do industries come into the South more rapidly by reason of such advertising, but because of the surveys and investigations of natural resources carried on behind the scenes of the advertising by the industrial departments, the real advantages for certain industries are discovered, disadvantages likewise are charted, and industries are enabled to select the locations best adapted to their peculiar needs.

Of course, the power companies and the railways can prosper only as the sections prosper that are served by them, and their executives have long recognized that fact. The advertising campaign of the Georgia Power Company is merely one more illustration of the broad-gauged constructive work, based on enlightened self-interest, constantly carried on by the public service corporations of the South.

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**OF COURSE THEY HAD TO CALL  
ON THE SOUTH**

IN the organization of the world's greatest bank, formed by the consolidation of the Chase National and several other New York banks, Charles S. McCain was elected chairman of the board of directors. Mr. McCain is a native of Arkansas, having gone to New York in 1926, since which time he has made remarkable progress in that great center of finance. He was graduated from Yale in 1904. In Arkansas he first became cashier of the Bank of Prescott and the Bank of McGhee, both of which he helped to organize. In 1913 he organized the Bankers Trust Company of Little Rock, becoming vice-president and later president. Then he went to the National Park Bank of New York as vice-president in 1926, and was made president a year later. When the bank was merged with the Chase National he became president of the consolidated institutions, and now in the big combination, which places the organization as the leading banking concern of the world with \$3,000,000,000 resources, he is called to the chairmanship of the board.

A few weeks ago we referred to the fact that a New York paper a year or so ago had mentioned that 200 of the leading financial and business men of New York had come from the one city of Little Rock.

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**AMERICAN FARMERS EFFICIENT**

IN an address before the Traffic Club of New York, Secretary Hyde, reviewing the progress of agriculture, said:

"Measured against all other problems the farmer has increased his own efficiency. In the last ten years he has increased his output per man by 20 per cent. In the face of a declining farm population and an increased urban population he has kept successfully supplied the nation's needs and produced a surplus in many crops in addition; and in this surplus lies one of his most serious problems. The American farmer is the most efficient farmer in the world."

# Associate Membership Plan of the Savannah Chamber of Commerce

**Neighboring Counties Join in Unification of Effort for Upbuilding of Whole Savannah Area**

By THOMAS R. JONES, Executive Vice-President, Chamber of Commerce, Savannah, Ga.



**Col. E. Geo. Butler,  
President,  
Savannah  
Chamber of  
Commerce**

E. George Butler, reached the conclusion that the best way to avoid a lopsided development of the so-called "Savannah Zone" would be to coordinate the best thought and activity of all the counties in South Georgia and lower South Carolina toward the prompt and sensible solution of common problems.

It was President Butler's belief that city and county should sit at the same table and that the industrial, commercial and agricultural growth of Savannah and all the other towns in the region should be considered as a whole and that a complete understanding and friendly sympathy should prevail throughout nearly one hundred counties affected.

Accordingly, the farmers, the merchants, the professional men, the industrial executives of all that coastal plain were invited to become affiliated with the Chamber of Commerce as associate members. They were told there were no dues to pay and that Savannah had no axe to grind; that Savannah did not ask them to trade in the metropolis, when they could buy the same commodities at home; it was impressed upon the neighboring counties that unification of effort was the only thing desired and that through it there could be brought prosperity—not just to Savannah nor to any other single town but to the entire section.

The attitude of the Chamber of Commerce inspired confidence and from less than a hundred associate members in the beginning there are now approximately fifteen hundred outstanding citizens of those counties who are actively at work with the Savannah organization.

**I**N the region around Savannah, now being referred to as "The Coastal Empire," there has been carried on for more than a year an experiment in co-operative effort that has attracted widespread attention.

In January of last year, the Chamber of Commerce of Savannah, under the leadership of Col.

Col. Butler instituted a survey of agricultural products and is now following it with another for current crops in a more extensive way.

He has made available for each town in the region a set up for an industrial survey, placing at their disposal the assistance and advice of the Chamber in securing for them those industries which would be reasonably sure to succeed, taking into consideration the raw materials on hand.

He has encouraged the taking of timber surveys in these counties, and during the year five general conferences were held attended by hundreds of associate members who presented for consideration matters pertaining to road construction, education, health and marketing.

Along with the expansion of the idea there naturally came a demand for a cooperative marketing plan and accordingly there has recently been chartered the Southeastern Agricultural Products Cooperatives Consolidated, whose board of directors were chosen from a list of dominant "dirt" farmers in the region. The object of this association is to build up a comprehensive marketing system in order to bring greater prosperity to the producers of potatoes, melons, tobacco, peanuts, peaches, cotton, beef cattle, dairy products, eggs, chickens and other commodities including truck, all of which are produced in large quantities and can be produced in still greater volume when demand justifies. Incidentally the Savannah Chamber has made an exhaustive analysis of British and continental markets on foodstuffs and is prepared to give proper direction to export commodities as well as coastwise business when the plan becomes operative.

On March 5 a representative of the Federal Farm Board met the directors of the cooperative association at Savannah and extended the advice and counsel of that body in its future functioning.

Thirty days ago, at one of the associate membership meetings it was decided by the members from the various counties themselves that it would be a good idea to advertise the "Coastal Empire" to the world—to let prospective industries and farmers know about the rich farm lands, the enormous tracts of hard wood timber, the climate and the hospitality of the people; accordingly many of the counties have already ap-

pointed executive committees to raise a fund. One county, Liberty, has already completed its campaign which went considerably "over the top."

The plan is for each county interested to raise its own fund, probably from \$500 to \$1000, according to its population strength; the money is to be owned and banked in the home county but the only proviso is that it is to be used cooperatively in a joint advertising campaign and the Savannah Chamber is not to spend the fund but on the other hand it will be handled by a specially drafted committee from the counties themselves.

President Butler and other influential men in the Savannah Chamber have made a number of visits to neighboring counties and the county members are prompt to "sit in" on meetings in Savannah. Member luncheons at which joint problems are discussed are often attended by as many as 500 men.

Last November the Savannah Chamber staged what was termed the "Savannah Forward Movement," by which it raised nearly one-third of a million dollars to cover its program for the next three years. With better financing it is now able to strengthen its work in the "Coastal Empire" which promises so much for the future of the two states. In furtherance of its work agriculturally the Savannah body is now making analyses of the iodine content of its vegetables and believes that the result will mean better prices for its farmers with the possibility of an increasing number of canneries in the small towns.

To bring together the leaders of an entire section; to have them calling each other after the manner of Rotary, by their first names; to banish completely all suspicion or doubt between city business men and those of the rural districts; to get more than a million people vitally interested toward the same ends, understanding each other and putting aside merely selfish interests in order that the prosperity of a section may be stressed is a most constructive piece of work and Col. Butler, his 3000 members in Savannah and his 1500 out of town members, have undoubtedly started something which will be of great economic value to the Southeast.

Col. Butler himself is frequently alluded to as the man who brought football tactics into civic life. As a Georgia Tech

star under Coach Heissman some years ago, he has brought into Chamber of Commerce work the ability to lead and the eye to see opportunities to advance the ball from a community development standpoint. At the last general meeting

of the Chamber of Commerce he was tendered the Lucas Trophy, a silver loving cup awarded annually in Savannah for the man who has done the most worthwhile thing for his city during the current year.

## Building Two Islands in Biscayne Bay

Two islands, each with an area of approximately 370 acres, are being created in Biscayne Bay, north of Miami Beach, Fla., for the Indian Creek Golf Club, an organization of New York, Florida and Pennsylvania capitalists who are constructing one of the unique golf courses of the country. With the exception of a comparatively small area, reserved for home sites for club members, the whole of the two islands will be used for two 18-hole courses, after plans by Toomey & Flynn of Philadelphia and Miami. Construction of the islands, including dredging operations, seawall work, etc., is under direction of Watson & Garris Engineers, Inc., of Miami.

On the south island a large club house is being built on a hill 32 feet above the water level of the bay. A number of somewhat smaller hills and dales have been formed over the entire course. Dredging, filling and seawall construction for the south island are practically completed, and work is under way on streets, bridges, water and electric supply lines. Building large hills by hydraulic dredges involved many engineering features of an unusual nature. The Clark Dredging Co., Miami, which has contract for the dredging work, at one time had four large hydraulic dredges on this project. The seawall was constructed by the Shore-Line Builders, Inc., Jacksonville. Work on the north island will probably start this summer.

A Weber Type "C" seawall, of back-anchored construction, was selected because of its strength, beauty and economy. It consists of interlocking, pilastered, premolded, reinforced concrete slabs in combination with steel founda-

tion piling. The steel piling also forms the bottom anchorage for the wall and the pilaster reinforcement. Foundation piling consists of large steel rails placed 8 to 10 feet apart and driven from 3 to 5 feet into limestone rock forming the bottom of the bay. Concrete is waterproofed, and a special silicification process, designed to prevent destructive chemical influences of sea water, is used. Large reinforced concrete anchor discs and rust-protected steel rods are used for back anchorage of the wall. A wide concrete coping is provided to serve as a wave breaker and to diminish the spray action in rough weather. Expansion joints are placed as needed. Railings, balustrades, walings, mooring posts and other seawall accessories are provided as desired.

Among special features of the seawall are the many turns and curves, designed to provide the water hazards of the golf course. In its total length of over three miles, about eight per cent of the seawall was built in a straight line. Through introduction of specialized manufacturing processes to insure precision of assembly and uniform quality of parts the developers have been able to eliminate most of the ordinary risks of such maritime construction, delays by adverse conditions, etc., with a consequent reduction in cost of construction, they state. While there are several other types of Weber-Shorewalls, which differ greatly in construction details in order to meet local conditions, the general principles of design remain sufficiently alike so that practically the same special forms and equipment are used for all the different types of walls.



Showing Back-Anchored Construction of Weber Type Seawall.

Reinforced concrete slabs are used in combination with steel foundation piling.

## GOVERNMENT ENLARGING HELIUM PLANT

Capacity of Tanks to Be Increased to 2,000,000 Cubic Feet

Amarillo, Tex.—The government-owned helium producing plant and storage tanks here are being enlarged to meet the growing needs of the Army and Navy, and by July 1, according to F. A. Vestal, engineer in charge, production will be ample, even though the requirements of these two departments of the government should be twice as great as they are at present. During 1930 the needs of the Government dirigibles will be approximately 12,000,000 cubic feet, it is estimated, and it is expected that twice that quantity will be required in 1931. Equipment from the Fort Worth plant, which is being dismantled, is being installed in the Amarillo plant, and the present storage capacity here, of 1,000,000 cubic feet, is being increased to 2,000,000 cubic feet. Improved methods are said to have brought about a big decrease in the cost of producing helium and it is thought still greater decreases will be made. The supply of gas from which helium is extracted, comes from extensive government holdings in the Amarillo territory, including 4 wells with a combined flow of 32,000,000 cubic feet of gas daily, and leasehold rights on 26,000 acres. Negotiations are now pending for surface and gas rights to 11,833 acres additional. The wells are connected with the plant by 11 miles of 6-inch, high pressure pipe.

## Memphis Flood Control Congress Postponed

The National Flood Control and Navigation Congress and Exposition, which was to have been held in Memphis on April 14-19, and was postponed to May 26-31, has again been postponed, this time to October. It is the plan of the Congress to bring together many students of various phases of the flood control problem in a discussion of reasons for and against, and means of achieving, a degree of control that will protect the tributary valleys as well as the lower river.

## Hungary Will Compete With United States Agriculture

American producers of pork products are faced with increasing competition from Hungarian producers in the markets of Central Europe, says Louis G. Michael, U. S. Department of Agriculture economist, who is completing a series of reports based on a survey of European agriculture for the Bureau of Agricultural Economics.

## Automotive Production Methods Feature South's Newest Industry

**Initial Unit of Dodge Motor Boat Plant Completed at Newport News at Cost of \$1,000,000 to Be Largest in United States—Many Unusual Features in Design and Mechanical Equipment to Cut Production Costs**

*By*

CARROLL E. WILLIAMS.

**T**HE \$1,000,000 unit of the Horace E. Dodge Boat & Plane Corp., recently completed on a 100-acre tract fronting Hampton Roads at Newport News, Va., is the country's most modern complete plant devoted entirely to the manufacture of speed pleasure boats, produced by straight-line production methods on a scale larger than ever attempted before. The plant employs the same efficient and economical methods which have proved so successful in the manufacture of automobiles. Tested material is distributed from stock storage racks to the various station racks each night. Each man knows what he is to do. Every detail has been worked out for the employees' convenience and welfare. So far as possible ideal working conditions are provided through natural and artificial light, temperature control, air conditioning, etc., and it is anticipated the output will reflect the employees' condition and attitude.

The plant group comprises: Boat factory—126 by 700 feet; boat storage—78 by 340 feet; heating plant and machine shop—40 by 85 feet; office—30 by 75 feet; lumber storage—35 by 120 feet; watchman's house—18 by 25 feet.

Production begins at the north end of the factory building, where the lumber storage shed and the dressed lumber storage section are located. At this end is a motor storage and testing room, 31 by 80 feet, and a metal parts storage room, 31 by 70 feet. An office for receiving, checking and distributing all materials throughout the factory is also located here. It is the clearing house and key position for material distribution, and all lumber of the proper kind and grade is distributed from here to the mill, where it is run through the necessary machines located for successive operations. The mill is 126 by 120

feet. Finished material is stored on three wood parts storage balconies, each 18 by 40 feet, located above the mill section. Materials are distributed to the upholstering department, 31 by 40 feet, located over the mill or to the construction department as required.

Construction department, 126 by 255 feet, next in line, comprises six stations, to each of which is distributed nightly the necessary material for a full day's work. Operations in the construction department range from the laying and assembling of stem and keel to the installation of rough hardware. A complete overhead monorail system conveys

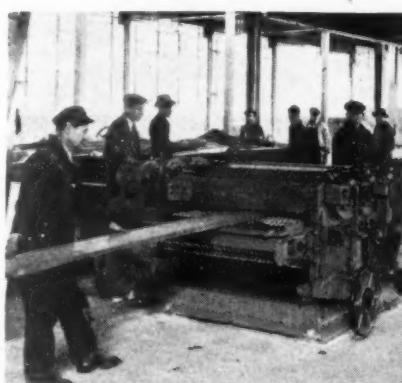
feet, and is separated from the construction department by large folding doors. It is completely enclosed. Temperature regulation, air supply and exhaust have been thoroughly worked out. At station No. 8 motors are lowered into the hull and installed. At station No. 9 all finished hardware and finished material is installed.

After passing through station No. 9 the boat is ready for the water test. An electric gantry crane moves along the launching platform on the waterfront side of the factory. The boat is conveyed by monorail to the crane, which moves to a convenient place over one of seven docks and, sending the boat out over its cantilever arm, lowers it to the water. The water test then begins. Gasoline and oil are obtained from one of two storage rooms under the launching platform. Tests are conducted in a 200 by 300-foot basin or in a channel 80 feet wide and 1500 feet long. The padded docks are so equipped that a boat may be either tied up or partly suspended out of the water.

Following the water test the crane picks up the boat and places it back on the platform. It then is moved to the section of the factory devoted to final inspection and rechecking, after which the boat is made ready for shipment, when it is conveyed by the monorail system straight into the end of a box car.

At the south end of the factory is a special boat-building and service department, which together with a shipping department, covers an area of 135 by 124 feet.

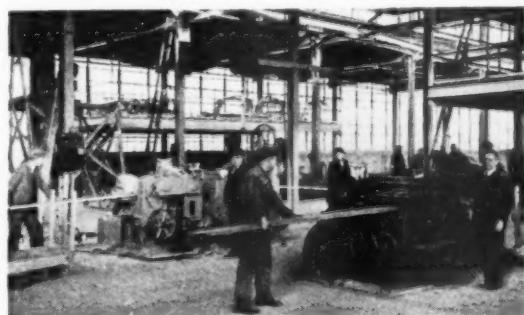
The boat storage building, 80 by 340 feet, is covered with a complete system of small gauge railroad tracks, over which the boats are conveyed to and from storage. The floor is of dirt, hav-



One of the Triple-Drum Sanding Machines

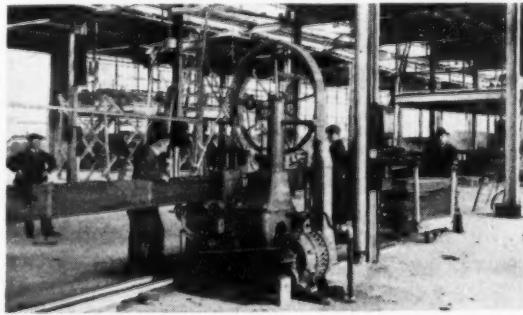
the boat from one station to the next. A transfer crane at the end of the construction department takes the unfinished boat either into the paint department or to the boat storage building. A superintendent's office and first aid room are located in this department.

The paint department is the seventh station. It covers an area 126 by 135



Planer at Left, Moulding Machine at Right

Merchant Band Resaw, Direct Motor Driven



ing the necessary moisture to keep the hulls from drying out.

The new plant called for mechanical installations especially designed for boat production. Different temperatures, air changes and exhausting systems, as well as gasoline, fuel oil, lubricating oil, compressed air, vacuum cleaning and refuse exhaust piping systems, etc., are required.

A separate power house, 40 by 85 feet, houses two fire tube steam boilers. Space has been provided for installation of a third. These are arranged for burning fuel oil at one end and sawdust and shavings from the planing mill in the other end. A compressor provides air for manufacturing purposes, for an oil pump for feeding fuel oil into the boiler, for a water pump for circulating hot water through the plant, for a feed water pump, for a water heating apparatus and a small machine shop and electro-plating shop.

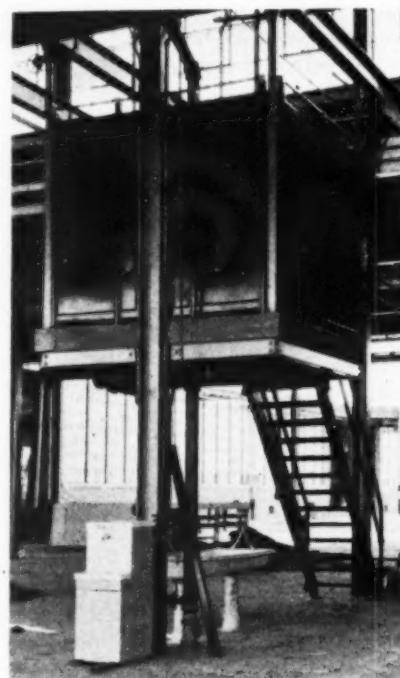
Adjoining the boiler house are two 12,500-gallon fuel oil storage tanks, one 12,500-gallon gasoline tank, and a small pump house in which are located oil and gasoline pumps to unload gas and oil from tank cars into the storage tanks and also distribute gasoline to motor test rooms and to the boat dock where airport-type gasoline dispensing units feed gasoline directly into gas tanks in the motor boats alongside the dock.

The factory proper is heated by steam from the boiler house by means of unit heaters suspended overhead, several of which also ventilate the area they heat. This is especially true in the varnishing department where fresh air is necessary for healthful working conditions and where a temperature of 80 degrees must be maintained to produce high grade varnished finishes.

The sanding department is specially ventilated. The system exhausts the



Storage Shed With Capacity of 500 Boats



Showing Unusual Arrangement of Complete Toilet Facilities

dust-laden air through filters to extract the dust, and the clean air with an added amount of fresh air is returned to the sanding room. Refuse in the planing mill is removed from each wood-working machine by a suction blower system, and conveyed in sheet metal ducts to the boiler fire box. A vacuum cleaning system is provided for keeping the plant clean, and also for removing sawdust and shavings from the interior of boats in various stages of completion. Metal storage bins, shelves and lockers are provided for storing parts and raw materials of all kinds.

The plant is protected against damage by fire by a complete automatic sprinkler system and a yard hydrant system.

Much thought has been given to providing the utmost in safety in connection with the electric installation, for practically every employee will use electric power. For instance, power distributing panels, lighting panels, switchboards, etc., are of the dead-front type.

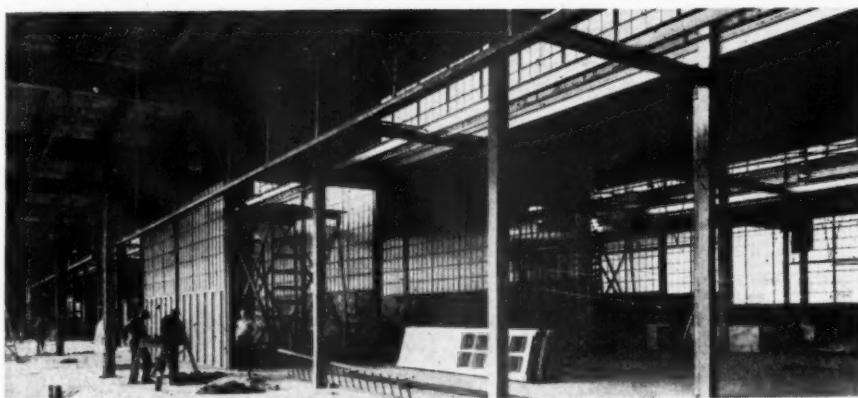
Three classes of current are used, namely: 1—Normal voltage for general power; 2—high frequency current for wood-working machinery; 3—high frequency current for portable tools, such as drills, screw drivers, etc. For normal power current, 440 volts, 3 phase, 60 cycles is used. Current for special wood-working machines is taken from frequency changer motor generator sets, converting from 440 volts, 3 phase, 60 cycles to 230 volts, 180 cycles, 3 phase.

Lighting is designed to give approximately 12 to 16 foot candles throughout the plant. Control of lights in general is by local switches mounted on columns. To permit changes in various departments at minimum cost all conduit and feeders are run overhead exposed. Switchboards are the totally-enclosed dead-front type with switch handles interlocked, so it is impossible for anyone to remove or replace fuses while they are alive. All starters for milling machinery and other motors are of the magnetic push-button type.

For operating small tools along the



Power House of the Dodge Plant



Sanding Rooms Before Installation of Doors

assembly lines, a continuous overhead trolley 3-phase bus is installed, with special trolleys, mounted on the structure. The trolleys are mounted on ball-bearing rollers, so that hardly any effort is required to move them. These trolleys are kept in place by strong springs, providing positive contact to the 3-phase buses which are installed in a 5-inch channel and are thoroughly insulated. Contacts are so arranged in the trolleys that it is impossible to connect to the wrong phase on the bus. Trolleys can be taken from one bus duct run to another, each being equipped with a handle with spring release, so connecting or disconnecting is practically instantaneous. The advantage claimed for this system of operating small electric tools is that it keeps all cords above the workmen instead of having the cords lying on the floor.

There is a complete outdoor type transformer substation, of the structural tower type. All switchgear, insulators, and buses are designed for a future potential of 13,000 volts, as it is the intention of the Virginia Power & Light Co. to serve the plant with a 10,000-volt line when future expansion takes place.

Purchase of the plant site on Hampton Roads was announced in the MANUFACTURERS RECORD of September 19, 1929, when plans for the first unit had been completed by Philip L. Small and Associates, Cleveland, Ohio, and construction began shortly thereafter, general contract having been awarded to the Virginia Engineering Co., Inc., Newport News. Selection of the Hampton Roads site was made after an exhaustive comparison of a number of available locations, the search being carried on for almost a year. The present site proved the most advantageous, the company declared, because of the tremendous expanse of water and the lack of traffic congestion, and the fact that the 1000 miles of Chesapeake Bay shoreline are brought up to the factory's very walls, and the water is unusually clean and free from drift. In addition, boats may be readily tested in both fresh water and

salt. The natural beauty and pleasant surroundings of the site were also a determining factor in choosing the location, as well as the fact that fishing and duck hunting, boating and yachting are entered into so actively. Open water will permit uninterrupted testing and shipping throughout the year. Adequate facilities for shipping by rail and water are afforded.

Another factor of particular importance in the Dodge decision was the shipbuilding tradition of the Newport News area, a tradition which has been in the making for many generations and which has produced an unusual number of highly skilled workmen. The company officials were also impressed by the living conditions for both executives and employees. Main executive offices have been established at the Newport News plant, but the company will continue its sales headquarters in New York.

The firms which were engaged in construction work and those that supplied principal items of equipment and material included the following:

**Structural steel**—Virginia Bridge & Iron Co., Roanoke  
**Ornamental and miscellaneous iron**—Walker Machine & Foundry Corp., Roanoke  
**Dredging, testing basin**—Hannaman Burroughs, Co., Salisbury, Md.  
**Dock and piles**—Carpenter & Petrie, Norfolk  
**Gantry crane**—Maris Brothers Co., Philadelphia  
**Boilers**—E. Keeler Co., Williamsport, Pa.  
**Doors**—Richards-Wilcox Mfg. Co., Aurora, Ill.  
**Metal sash**—Detroit Steel Products Co., Detroit  
**Industrial track**—Hall Hodges Co., Richmond  
**Sprinklers**—Dominion Automatic Sprinkler Corp., Richmond  
**Monorail conveyors**—American Monorail Co., Cleveland, Ohio  
**Collecting system**—Brooks Sheet Metal Works, Norfolk  
**Glass**—Binswanger & Co., Richmond  
**Painting**—O. K. Nestor, Norfolk  
**Millwork**—Weaver Brothers, Newport News  
**Roofing and sheet metal**—O. J. Brittingham, Newport News  
**Brick**—Richmond Face Brick Co., Richmond  
**Plumbing fixtures**—Noland Co., Newport News  
**Hardware**—Hawks-Maupin Co., Norfolk

**Lumber**—M. T. Blassingham & Co., Norfolk  
**Terra Cotta pipe**—Robinson Clay Products Co., Norfolk

**Unit Heaters**—York Heating & Ventilating Corp., York, Penna.

**Excavation**—G. Y. Carpenter, Chester, Va.  
**Floor covering**—Earnest Brothers, Richmond, Va.

**Plastering**—W. A. Brand, Staunton, Va.  
**Mahogany for boats**—Ichabod T. Williams & Son, New York, and Palmer & Parker Boston, Mass.

**Saws, etc.**—S. A. Woods Machine Co., Boston, Mass., and Yates-American Machine Co., Beloit, Wis.

**Sanding machines**—H. B. Smith Machinery Co., Smithville, N. J.  
**Small automatic hand tools** (Largest order ever placed for boat work)—Black & Decker, Towson, Md.

**Miscellaneous boat building machinery**—W. B. Mershon Co., Saginaw, Mich., Wysong & Miles, Greensboro, N. C., Hermance Machine Co., Williamsport, Pa., Tannehitz Works, Grand Rapids, Mich., Baxter D. Whitney & Son, Wincendon, Mass.

## SULPHUR PRODUCTION AT TOP IN 1929

### Texas Supplies Practically Total Output

Production, shipments and exports of sulphur reached new high levels in 1929, according to the Bureau of Mines. Production amounted to 2,362,389 long tons in 1929, compared with 1,981,873 tons in 1928, and 2,111,618 tons in 1927, the previous record year. Shipments totaled 2,437,238 tons, valued at about \$43,800,000, compared with 2,082,924 tons, valued at about \$37,500,000, in 1928, the previous record year. In 1929 production was continued at Gulf, Texas, by the Texas Gulf Sulphur Co.; at Bryan, Hoskins Mounds and Freeport, Texas, by the Freeport Sulphur Co.; at Benavides, by the Duval Texas Sulphur Co., and at Wharton, by the Union Sulphur Co. A new operation on Boling Dome, at Newgulf, Texas, was started by the Texas Gulf Sulphur Co. the latter part of March, 1929.

Louisiana since 1928 has ceased to ship sulphur and none is being mined. Over 99.9 per cent of the country's production and shipments came from Texas. Properties of the Humboldt Sulphur Co. at Sulphur, Nevada, and the Utah Sulphur Industries at Sulphurdale, Utah, were the only others that reported production and shipments in 1929.

Stocks on hand at mines decreased nearly 100,000 tons, following a decrease of approximately 100,000 tons in 1928, and were about 1,900,000 tons on December 31.

Exports of sulphur or brimstone totaled 855,183 tons, valued at \$17,628,813, compared with 685,051 tons, valued at \$14,345,075, in 1928, and 789,274 tons, valued at \$16,254,227, in 1927, the previous record year. Exports of refined, sublimed, and flowers of sulphur decreased from 44,536,508 pounds, valued at \$706,766 in 1928, to 39,564,975 pounds, valued at \$649,240, in 1929.

## Miniatures of Southern Cities

*UNDER this heading the MANUFACTURERS RECORD continues publication of the series of thumb-nail sketches of Southern cities, indicating in brief their resources and presenting some of their outstanding accomplishments in 1929.*

### Baltimore, Maryland



Curtis-Wright Flying Service—Photo Div.

By FRANCIS M. BOND, Baltimore Association of Commerce.

**M**OST significant of the industrial development of Baltimore, which now has an estimated population of 841,728, was the remarkable stride made in the aircraft industry during 1929, when approximately \$10,000,000 was invested by enterprises connected with air transportation. The first unit of a plant for the Glenn L. Martin Co., the largest in the world, and a plant of the Berliner-Joyce Aircraft Corp., were both completed, while construction was started on a five-acre plant for the Curtiss-Caproni Corp. Work was also begun on the Municipal and the Curtiss airports.

Baltimore ranks seventh among the industrial cities of America; included in its industrial life composed of more than 2000 manufacturing plants making more than 2000 commodities are: The world's largest sulphuric acid and phosphate plant; the largest tin-decorating plant in the world; the biggest sugar refinery on tidewater; the largest alcohol manufacturing plant in the world; the world's largest copper refining plant, refining about 20 per cent of the world's supply; the largest spice factory in the United States and probably in the world; and the largest steel plant in the world on tidewater is located within ten miles of the heart of the city.

This city leads the world in the manufacture of bottle stoppers and sealing devices; is the largest tin container producing city in the United States and has one of the country's largest tinplate plants; makes more straw hats than any other city in the United States except New York, and has one of the country's largest broom plants. Baltimore is also a leader in manufacture of electric porcelain insulation, porcelain enamels and enameled wares, pajamas and undergarments, ship-building and ship repairs, pharmaceuticals, proprietary medicines and drugs. Baltimore stands out among producers of fine printing, engraving and lithographing, the city being a pioneer in the latter.

On the basis of value of products the manufacture of clothing leads the local group industries, among which, named in the order of their importance, are: Slaughtering and meat packing; printing and publishing; fertilizers; bread and bakery products; foundry and machine shop products; railroad repair shops, general construction and repairs; men's furnishings; patent medicines and compounds; and stamped

and enameled ware. Products of the foregoing industries range in value from \$65,938,217 for cloth down to \$10,875,824 for stamped and enameled ware, there being 12 other industrial groups with production values of from \$9,329,239 to \$4,458,426.

Its position as an Open Shop community has always been maintained by the city of Baltimore. Local plants are seldom affected even by national strikes, and Baltimore longshoremen have steadfastly refused to be influenced by trouble in harbors of New York, Philadelphia, and other Atlantic ports. During the war one large concern increased its labor force from 600 to 22,000 and operated four years on war work, without even a grievance committee being created. This favorable situation is, in great measure, due to the fact that Baltimore's wage earners are home owners. By actual count, 62.2 per cent of the city's dwellings are owned by their occupants.

The value of building permits issued in Baltimore during the calendar year of 1929, with 20 per cent added for undervaluation, was \$39,809,880. Outstanding among the buildings completed during the year was the city's first 34-story structure, the Baltimore Trust Building.

### Jackson, Tennessee



Wootton's Studio, Jackson

By HUGH HARVEY, Chamber of Commerce.

**J**ACKSON, with its population of 31,000, has 44 manufacturing plants and three railroad shops employing more than 3000 people who receive an annual payroll of approximately \$3,000,000. Articles manufactured include: Wood and metal products, cotton seed oil, cotton cloth, flour and gasoline engines. Madison County, in which the city is located, is rapidly advancing in dairying, cattle raising, fruit and berry growing and intensive truck gardening.

A \$300,000 plant is now under construction by the American Creosote Works of New Orleans, and a new \$40,000 packing plant is also being built. Valuation of building permits for 1929 was \$403,086, according to the city engineer.

The skilled trades and railroad employees are organized, but the manufacturing industries operate under the Open Shop plan.

Four railroads and paved highways serve the city.

## Spartanburg, South Carolina



Southern Air Service, Greensboro, N. C.

By L. H. DUNCAN, Chamber of Commerce.

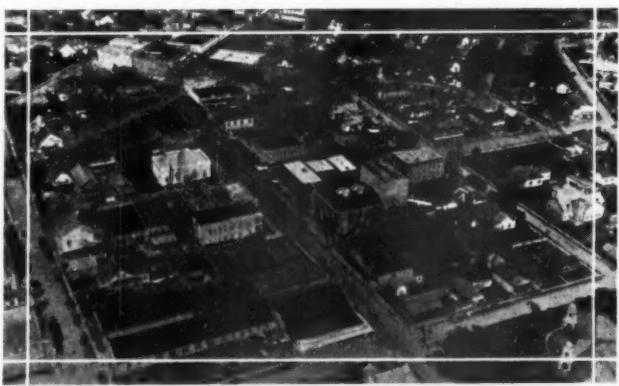
**POPULATION** of Spartanburg, now 34,000, has doubled in 20 years.

The year 1929 marked the opening at Spartanburg of the first plant for manufacture of textile mill machinery on a large scale in the South, the Standard Looms, Inc. Further recognition of Spartanburg's position as a supply center of Southern textile territory was made by establishment of offices by the Draper Corp., manufacturers of looms, and by the Saco-Lowell Shops, manufacturers of spindles, and by numerous other concerns in these lines.

From a civic standpoint the more important undertakings of the year include revision of the building code and appointment of a zoning commission.

Spartanburg is a strictly American Plan Open Shop community.

## Lafayette, Louisiana



By F. V. MOUTON, Lafayette Parish Chamber of Commerce.

**L**AFADETTE is situated halfway between New Orleans and Houston at the intersection of the Old Spanish Trail and the Pershing Highway. The city has a population of 12,000.

One of the largest sugar refineries in the state is located in the city; it has a capacity of 2000 tons of sugar cane daily. Also located in this community are: Two large cotton mills; a small sugar refinery; large syrup mills; a cotton oil mill; sash and door factory; cotton compress; a salt refinery; municipal light and water plants; an ice plant, and a plant for manufacture of artificial gas and owned by the Associated Gas and Electric System. The local creamery has given impetus to development of dairying in the parish.

Divisional headquarters and the local terminal of the

Southern Pacific Railroad have a monthly payroll of approximately \$100,000.

During 1929 a cotton compress, a canning factory and a rendering plant were established.

The seasons and the soil in this section permit two crops a year on the same land. Lafayette is located in the middle of over 6,000,000 acres of fertile lands, with good gravel roads. These roads will be paved by 1932.

Unlimited quantities of raw material in sugar cane, bagasse, rice straw, corn and cotton stalks, hardwood timber and moss are available in this section for pulp and paper mills.

This is a strictly American Plan Open Shop community.

## San Antonio, Texas



By K. S. WENDLER, San Antonio Chamber of Commerce.

**POPULATION** statistics show that San Antonio in 1900 had a population of 53,321, in 1910 a population of 96,614, in 1920 a population of 161,379, and competent estimates give the 1930 population as 316,000.

Many important advantages insure the future development of the city, the strongest of which are: It is the center of the world's greatest oil and gas fields. It is the key city to the commercial development of Mexico. It is the metropolis of an agricultural region, unequalled in richness of soil and value of products. It has a year-round climate which attracts thousands of tourists. Adjacent to the city are great wool and mohair districts which annually produce a third of the Texas wool clip. In this territory is the greatest winter truck growing area in the South, shipping annually from 40 to 50 thousand carloads of truck and fruit when snow blankets the North.

For more than 200 years San Antonio has been the financial and commercial capital of South and Southwest Texas, an area exceeding in size the New England States and New York combined. Bank clearings for 1929 gained more than \$50,000,000. The year also set a new record for postal receipts with a gain of nearly \$200,000. Building permits totaled almost \$2,000,000 above 1928. In face of the fact that last year saw the most ambitious home building campaign in the city's history, a survey shows a single dwelling vacancy record of three per cent against a normal figure of five per cent.

San Antonio's building program definitely announced for 1930 and under way shows a total expenditure of \$46,480,000. It includes Randolph Field, the U. S. Army's West Point of the Air, which will cost \$50,000,000, and will yearly bring to the city an outlay of \$11,000,000 and have a population of 4000 people, 2700 of whom will be military personnel. New Artillery barracks at Fort Sam Houston will cost \$870,000; public schools definitely announced will cost \$3,500,000; new buildings at the Lady of the Lake College will cost \$250,000; \$5,000,000 is being spent by the Southwestern Bell Telephone Co.; Grosvenor Field, a commercial aviation project, will expend \$500,000 for initial construction during the year; the San Antonio Public Service Co. announced an expenditure of \$2,500,000 for public utility work; the Grayburg Oil Co. plans a new refinery to cost \$2,000,000; a theatre to cost \$2,000,000 has been announced; and a new department store and other smaller projects are planned.

## Montgomery, Alabama



Photo by 4th Photo Section, Air Corps, Maxwell Field, Montgomery

By JESSE B. HEARIN, Chamber of Commerce.

**M**ONTGOMERY has maintained a steady growth during the past year and now has a population of 66,000. The city is the largest sand and gravel center in the South and also the largest livestock market in the Southeast. Montgomery is the second largest commercial fertilizer center in the South. The largest syrup factory in the South is located here.

Completion of the 956-acre municipal airport last year was probably the most significant undertaking of the city. Officials of the Department of Commerce, the War Department and many private aviation companies have classed this airport as the best in the country. It is efficiently drained and lighted, and has fireproof hangars, administration buildings and club house. Another outstanding achievement was securing the Aviation Tactical School of the United States Army. Definite plans recently approved call for an expenditure of \$5,000,000 at Montgomery during the next two years for aviation development.

Montgomery expended \$3,489,000 for new buildings in 1929.

The city is classed as a strictly American Plan Open Shop community.

## Owensboro, Kentucky



By W. J. HANNING, Owensboro Chamber of Commerce.

**O**WENSBORO has an estimated population of 27,878. Located in this city is the Ken-Rad Tube and Lamp Corp., operating the largest plant making radio tubes and incandescent lamps south of the Ohio River and employing 900 workers. Owensboro leads the State of Kentucky in manufacture of balanced ration feeds for livestock and is

near the top in this line of manufacture in the South. Five large plants for this purpose are located here.

Owensboro has 55 diversified industries, including plants for manufacture of clay products, canned goods, lumber, cigars, tobacco, packing house products, farm wagons and ditching machinery, drop forgings, gray iron castings, fabricated structural iron, gas and oil engines, flour milling machinery and furniture.

The outstanding construction project undertaken during 1929 was the trunk line sewer system, which will cost \$1,200,000 when completed and is designed to care for future growth of population up to 75,000.

Labor is abundant and efficient, being native, white and American. All industries in Owensboro operate on the Open Shop basis.

## Kansas City, Missouri



© Creswell, Kansas City

By H. C. SMILEY, Chamber of Commerce of Kansas City.

**T**HE estimate for Kansas City's population is 457,000, while the estimate for Greater Kansas City, which includes Kansas City, Kans., North Kansas City, Mo., Independence, Mo., and the suburban districts close to the city limits, is 620,000.

Kansas City continues with the largest livestock exchange in the world, and also retains first place for: Distribution of agricultural implements; primary winter wheat marketing; distribution of kafir corn and Milo maize, and lumber and seeds; hay marketing, and for manufacture of American black walnut. The city is considered second in receiving and distributing of fruits and vegetables; third in distribution of butter, eggs and poultry, and in flour mill capacity and production.

Among the 200 new industries that came to this community from July 1, 1928, to January 1, 1930, were the Chevrolet assembling plant and the American Tobacco Company's cigar making plant. These two concerns will account for an increase in payrolls of from \$6,000,000 to \$7,000,000 a year. Total increase in payrolls from new industries is estimated at from \$8,000,000 to \$9,000,000.

About 85 per cent of Kansas City's industries operate Open Shop, but it is not said that the city is classed as strictly an American Plan Open Shop community.

Most significant of local undertakings in 1929 was instituting a study of a city plan, by which all surrounding counties and communities are cooperating to make the Kansas City area one of the most beautiful sections of the country.

In Greater Kansas City are 63 National and State banks and trust companies, with capital, surplus and undivided profits of \$38,125,000; deposits of \$316,304,000, and total resources of \$364,378,000.

Building permits in Kansas City, Mo., for 1929 were \$15,270,750. The number of apartment units built was 1237, and the number of dwellings, 830.

# Heavy Volume of Pacific Coast Lumber Traffic Via South Atlantic Ports to Central West

By JAMES V. SAYRE,

Market Editor and Business Manager,  
Lumber News, Portland, Ore.

Within the past eight months there has been a development in steamer-borne lumber traffic between the Pacific and the Atlantic coasts that has materially added to the business of East Coast ports. Baltimore, because the railroad rates from that Atlantic port into a large territory are lower than from neighboring cities, has been most benefited.

The new development is the increase in shipment of finished and milled lumber from Washington, Oregon, and British Columbia to points as far west from the Atlantic as western Ohio. This has come about through the low steamer rates now in effect, and which apparently will hold good for several months. The lumber is mainly Douglas fir and Western hemlock and consists especially of structural timbers.

In the early summer of 1929 steamer rates went down. Ten dollars was soon the going rate. What was known as the conference rate, subscribed to by a majority of the steamer lines and which had nominally remained at \$14, was finally abrogated until October 1. When that date came, there was still more tonnage in the trade than freight offering. In December one line announced a rate of \$8, and later \$7.50. Construction in the East Coast cities was light, and with lumber moving in limited volume there was insufficient general cargo to take all the steamer space.

Such being the background, the new development mentioned became noticeable when the \$10 rate was reached. What the West Coast lumberman calls "shed stock," that is, flooring, ceiling, siding and other kiln dried and milled upper grade items of fir and hemlock began to move in car lots by the cargo and back-haul route through Baltimore into western Pennsylvania and Ohio. What accelerated this movement has been not only the low cargo rate, as mentioned, but also the fact that cargo rates are entirely different from rail rates in that lumber is measured by cubical content and not by the superficial measure, in board feet, by which it is sold throughout the lumber trade. Consequently, while rough fir timbers 12 inches by 12 inches paid the full rate, milled stock such as siding, one inch by six inches superficial measure, was charged for by the steamers at its net, milled size. In the case of siding, with the rate nominally \$10 per thousand feet, this item of lumber cost 68 per

cent of the \$10 rate. Long ago what is called the "freight fraction table" was worked out. This shows the cubical content, in percentages, of all items regularly handled by the mills, and the actual freight cost at all rates.

While the railroads charge \$17.50 per thousand feet to haul this siding, for example, from Tacoma, Aberdeen, or Portland to Cleveland, the Baltimore and back-haul route works out about as follows:

Steamer freight to Baltimore (actual) \$6.80
Insurance and handling at Baltimore . . . . . 1.25
Rail freight at 30½¢ to Cleveland . . . . . 6.10

**\$14.15**

With the steamer rate now generally below \$10, the spread between the all-rail route and the Baltimore movement is all the wider.

The Western railroads and also the intermediate lines have been fulminating for a reduction in the through rate which will discourage this method of shipment into territory so far removed from the Atlantic seaboard. The Eastern lines, profiting more by the back-haul than by division of the through rate, have not joined with them before the Interstate Commerce Commission.

Meanwhile shippers of West Coast lumber in particular are comparing today's cargo rate situation, where the exact freight paid by a competitor is always an unknown quantity, with the old days before the Interstate Commerce Commission existed and the railroads made rates on a "competitive basis." Regulation and supervision of the steamer rates by this same Federal body is the

only remedy, shippers on the West Coast believe.

Considering the distance, intercoastal lumber moves at low cost at any of the rates in effect during the past ten years. New York lumbermen report it costs \$8 per thousand feet to ship lumber by steamer from Wilmington, N. C., to New York, yet in the intercoastal trade, that same rate applies from Puget Sound, for example, around through the Panama Canal and up to New York.

On the Pacific Coast lumber map, Baltimore figures as a strategic point from another standpoint. The largest manufacturer of West Coast lumber, the Weyerhaeuser Timber Co., maintains there a large distributing yard where 18,000,000 to 20,000,000 feet of lumber, shipped from the mills at Everett and Longview, Wash., are stored, going out in mixed cars of many items to retail dealers all over the Baltimore rate territory. At Wilmington, Del., is another yard owned by two mill companies of Grays Harbor, Wash.

Even into western Pennsylvania shipments via Philadelphia cost one cent more per hundred than through Baltimore.

In volume the West Coast lumber traffic to the Atlantic seaboard is very heavy. In November, a month of light shipment, 107,300,167 feet moved from Washington, Oregon and British Columbia to eastern ports.

During 1929, the Panama Canal tolls amounted to \$27,592,715. Intercoastal lumber paid a good share of this total, for whether the steamer rate is \$14 or \$7.50 per thousand feet, the steamers must pay an average toll of very close to \$1 per thousand for the lumber they carry.



Loading Heavy Douglas Fir Timbers on the Columbia River, Oregon, for Atlantic Coast Ports

## NEWPORT NEWS SHIP-YARD ACTIVE

### 7000 Men Employed and Work Under Way On Two Cruisers, Four Passenger Ships, Hydro-Electric Turbines and Other Machinery

Newport News, Va.—For the past year the Newport News Shipbuilding and Dry Dock Company has given employment to more than 6000 men and the working force now exceeds 7000. The principal new construction under way consists of the United States light cruisers "Houston" and "Augusta," two passenger and freight ships for the New York-Cuba Ward Line service of the AGWI Navigation Company, New York, and two passenger and freight ships for the Dollar Steamship Lines, also of New York.

The light cruisers are 600 feet long, with a beam of 66 feet, depth of 36 feet, and a standard displacement of 10,000 tons. Aluminum replaces steel in many parts of their construction to secure lightness. Electric welding has been freely used. The first of these ships will be delivered early this summer and the second in the spring of 1931. The Ward liners, "Morro Castle" and "Oriente," have an overall length of 508 feet and beam of 70 feet 9 inches, and a displacement of 15,975 tons at 26 feet draft. Machinery of 16,000 horsepower will develop a speed of 18.5 knots, and accommodations will be provided for 533 passengers. Both of these boats will be ready for service next fall.

Exceeding somewhat the largest passenger ships yet built in America, the two Dollar liners will be 633 feet long, with a displacement of 33,000 tons and a speed of 20 knots. They will accommodate 463 first class and tourist passengers and 784 steerage passengers. Keels will be laid this spring, work being well under way on them in the shops. All four of these passenger ships will be driven by electricity, steam to be supplied at 300 pounds pressure, 200 degrees superheat by Babcock & Wilcox water tube boilers.

A considerable volume of repair and reconstruction work is being done in the piers and dry docks of the company, while the pattern shop, foundry, plate and machine shops are handling a large number of orders for hydro-electric equipment. Among these is an order for four 84,000-horsepower hydraulic turbines for the Russian Government, complete with steel plate spiral casings. Shipments of the turbines will be started April 1 and are expected to be completed by May 1, 1931. A similar turbine rated at 57,000-horsepower is under construction for the New York Power and Light Corporation, Albany, shipment to begin

May 1 and completed in August. Each of these turbines weighs about 1000 tons and is said to be the largest unit in physical size yet constructed. Machine work necessitated the installation of a 35-foot special boring mill capable of extension without standard housings to 45 feet diameter. This tool was built by William Sellers & Company, Inc., Philadelphia. In addition to the turbines, the company is also making several Newport News patented trash rakes for use in hydraulic-electric plants to keep the racks at the intake free from floating and submerged trash. Hydraulic turbines recently shipped from the yards are now being erected in Georgia, Nebraska, Newfoundland and Chile.

### Completing Gasoline Plants

Konawa, Okla.—A natural gasoline plant under construction here for the Empire Companies, Bartlesville, Okla., is expected to be ready for preliminary operation by the last of this month, and

a similar plant at Arkansas City completed a short time later. The Konawa plant will have an initial rated capacity for treating 10,000,000 cubic feet of natural gas daily. The Arkansas City plant is being completely rebuilt and all new equipment is being installed. It will be able to treat a maximum of 40,000,000 cubic feet of natural gas daily, and will produce 10,000 gallons of gasoline daily.

### Work Soon on \$1,000,000 Hospital

Kansas City, Mo.—Work will soon begin on the new \$1,000,000 hospital to be erected here by the Jewish Memorial Hospital Association, according to Henry A. Auerbach, president. General contract for the building has been awarded to the Long Construction Company, Kansas City. Schmidt, Garden & Erikson, Chicago, are the architects and Greenbaum, Hardy & Schumacher, Kansas City, consulting architects. The building will be six stories and basement, with a maximum capacity of 150 beds.

## Power Station for Oklahoma Gas & Electric

Work is well under way on the Belle Isle steam-electric generating station of the Oklahoma Gas & Electric Co., according to H. W. Fuller, vice-president in charge of engineering and construction for the Bylesby Engineering & Management Corp. Work was started several weeks ago on footings for the substructure, following completion of the fabrication of reinforcing steel for building column footings. Cofferdam construction and the driving of steel sheet piling went forward in February.

Equipment of this new station will consist of one 30,000-kilowatt turbine, and in connection with the plant proper a large substation will be built from which 66,000-volt lines will run west to El Reno and north to Enid. Lines will also connect the company's Broadway substation and the city distribution sys-

tem as well as the present plant at Belle Isle, to the new plant. Completion of the station is scheduled for September 15, 1930.



### How New Belle Isle Power Station Will Appear When Finished

Architect's perspective of new project on which work is under way for the Oklahoma Gas & Electric Co.

# Geologist and Educator Outlines Development Program for Florida

By CHARLES W. DABNEY.

*Hon. Charles W. Dabney, Ph. D., one of the foremost geologists of the country; Assistant Secretary of Agriculture under President Cleveland and president at different times of the University of Tennessee and the University of Cincinnati, in a recent letter to the MANUFACTURERS RECORD, commented very favorably on the future of Florida, having spent the last two winters in that state. In reply to a request for his views on Florida and its future, he submits for publication the following, which is also applicable to much of the South.*

Florida has many areas of fertile soils, but the larger body is barren sands. In some regions, these should be allowed to remain in forests, or be reforested, but there are other areas, which, when properly prepared and supplied with plant food, produce fruits and vegetables in quantity. Under Florida's wonderful climate, these soils yield marvelously when abundantly enriched. It is evident, therefore, that the study of the physical and chemical properties of the soils and the methods of improving them and feeding the different crops are here of prime importance. This study includes problems in biology, chemistry, physics, and bacteriology especially, which must be solved in the laboratory and the field.

Consider the definite problem of the supply of plant food for orange trees and truck farms. Phosphate, potash, and nitrogen must be applied to sandy soils in quantities four or five times as great as used by the cotton and wheat farmers. Fertilizers are thus absolutely necessary and the chief expense of horticulturists. Cheap fertilizers are a great problem for all American farmers, but a far more acute one for the Florida horticulturists.

Most fortunately, Florida has great deposits of phosphates, the largest in the Eastern states. These deposits, however, are only partially developed and are being wastefully exploited by outside interests chiefly for the benefit of other states. Quantities of this phosphate, so badly needed on the Florida soils, are also being exported to Germany and other European countries, which are thus enabled to conserve their own supplies. There should be, first of all, a thorough survey of the phosphate resources of Florida and a policy of conservation adopted.

Then what will Florida do for nitrogen which it is buying chiefly from Chili and paying an export duty, besides freight and the importers' and distributors' charges? Of course, nitrate is costly and must remain so. Chemists have shown that ammonia and nitrate, which are exchangeable, can be economically made wherever there is an abundance of cheap power and cheap hydrogen. Both of these can be obtained from waste coal,

such as slack, too poor to ship, at the mines in Alabama and Tennessee; or by the combination of hydro-electric power, as may be obtained at many places in the South, and abundant coal from which to make the hydrogen. The raw materials are the nitrogen of the air and the coal we are wasting. If we had trained scientists, we would soon be making all the ammonia or nitrate we need from these sources. Shall we not train them in the South?

How about the potash? For fifty years, we have been importing our potash from Germany, chiefly, paying prices fixed by a government controlled syndicate. Now vast deposits of potash have been discovered in the salt beds of Western Texas and Southeastern New Mexico and the government is exploring them to find locations for mines. The outlook is that we shall soon be able to get from this home source the sulphate of potash that is required for orange trees. Fortunately, that is the particular compound most abundant and available in these American beds.

Florida and the other Southern states need increasingly great supplies of high grade fertilizers. They can be made much cheaper from home-produced materials and by better methods can be made richer. Why ship Florida phosphate to Eastern states to be manufactured and then sent back in mixed fertilizers?

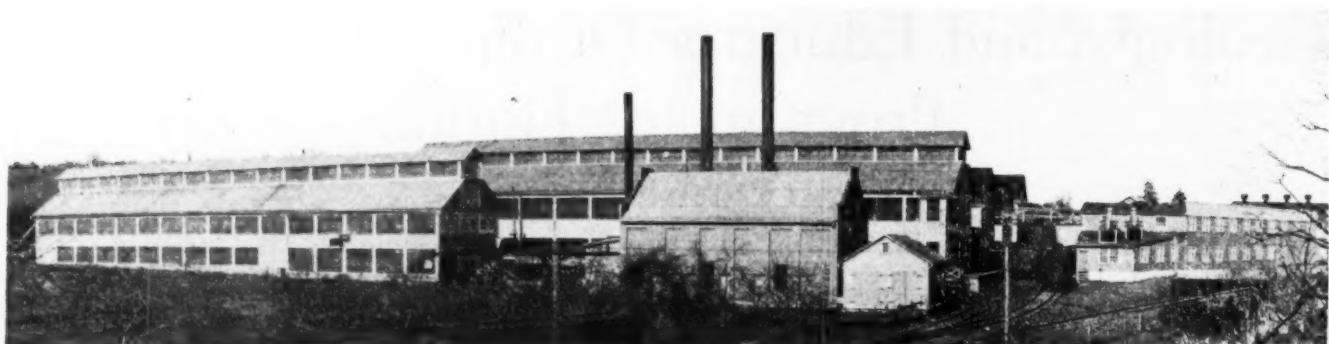
Fertilizers must be made more concentrated to save freight and labor in handling. Soluble "double" or "triple" phosphate can be made, or available phosphate can be produced by roasting it with potash from Texas instead of dissolving the rock in crude sulphuric acid, which makes it necessary to use driers and so greatly dilutes the product. By these methods, the horticulturist could get phosphate with double the amount of available phosphoric acid in it. The farmer should be taught how to mix his own fertilizers from the different chemicals to suit his different crops. These are all scientific problems and will have to be worked out by trained chemists. Our experiment stations and agricultural colleges are doing much to accomplish this, but the farmers and horticulturists everywhere will have to be taught to select.

Florida cannot live on oranges and winter tourists. Florida needs manufactories, as well as farms and orchards and gardens. A manufacturing population is needed to make home markets for the farmers and to give labor to the people of the towns and villages. Raw materials are varied and abundant, offering possibilities for manufactories. The markets in Florida are growing. Possibilities for exporting the manufactured products to the Caribbean, Central and South American countries are increasingly inviting. Power for these industries is being brought in from the great hydro-electric stations and will be made increasingly available and cheaper. Manufactories should be established in all the centers of population of Florida. Scientists and engineers are needed to do this work.

My final plea is for the boys and girls of Florida. After all, they are Florida's greatest resource and certainly its first duty is to them. Give them a chance to qualify themselves to do this work. A higher or a technical education is required these days by all the youth and it has been demonstrated in all parts of our country that, if our young people get a college or university education, they must get it near home. If they are sent off to distant colleges, the chances are they will not come back to Florida to work. Give Florida young people a liberal education, including the scientific training they need to do this work, and provide colleges for them at home.

## Developing Marble Deposit

Marble, N. C.—Raymond Harris, Murphy, N. C., has secured options on marble properties in the vicinity of Marble and is prospecting with a view to developing deposits. He has stripped the overburden from an area 250 feet square which shows a high grade silver grey and blue grey marble, according to H. J. Bryson, State Geologist, Raleigh. Core drilling in this locality shows a depth of between 250 and 300 feet. The property is within 200 feet of the Murphy branch of the Southern Railway and Mr. Harris may build a finishing plant on a railroad siding at Marble.



National Fruit Product Company Plant at Winchester, Which With Branches Requires About 2,000,000 Bushels of Apples Annually for Its Products of Vinegar, Apple Butter, etc.

## Fruit Growing in Virginia

**State Now Ranks Third Among Apple-Producing Regions of the Country—Largest Apple Storage Plant in World and Fruit-Product Manufacturing Make Virginia's Fruit Industry of Growing Importance**

By LEONORA W. WOOD, Keyser, W. Va.

**S**INCE the days of the early Colonist, fruit growing has been recognized as one of the leading industries of the Old Dominion. Almost every man who acquired a plantation began at once to develop a home orchard from seedling or grafted trees. For lack of distribution facilities much fruit was allowed to rot on the ground; and it was not until long after the Civil War that the industry developed commercial possibilities. By 1890 at least three large commercial orchards had been planted in the state, commercial nurseries were beginning to do a flourishing business, and commercial horticulture was proving to be practicable and profitable. Through discovery and development of orchard sprays, improved orchard tillage, refrigeration and cold storage, the marketing territory and the season of Virginia fruit was greatly extended.

Today Virginia ranks third among the great apple producing states of America; within the next ten years it expects to replace New York, which is second.

There are in Virginia around 3200 commercial apple growers, with approximately 8,300,000 bearing trees and 2,344,421 which have not yet reached the bearing age. And the average value of the commercial crop is around \$6,000,000. The commercial peach industry is also rapidly increasing in importance. According to report of surveys there are approximately 700 commercial orchards, with over 573,000 peach trees. Average yearly crop amounts to more than 500,000 bushels and brings the growers around \$750,000.

There is no section of the state where apple orchards are not found, but the commercial orchards are located in the

districts where soil, climate and other conditions are highly favorable to fruit growing.

Agriculturally the state is divided into seven sections: The North Valley, South Valley, North Piedmont, Piedmont, Roanoke, Patrick and Southwest. In the North Valley section are the counties, Frederick, Shenandoah, Rockingham, Warren, Page and Clarke. Here are around 776 commercial orchards, with around 1,512,000 apple trees, or 35.2 per cent of the commercial apple planting in the state. From Frederick County is shipped to the foreign market more apples than from any other county in the United States. The Shenandoah district, particularly Winchester, which has been called the capital of the Shenandoah, has done most to advertise Virginia apples.

Located in the heart of one of the great apple growing sections of the

world, Winchester has attracted some of the most influential and enterprising business men of the country, among them Hon. Harry Flood Byrd, recent Governor of Virginia, and his brother Capt. Thomas B. Byrd. The Governor had entered the orchard business in 1906, entered it cautiously at first, leasing a number of orchards which he operated successfully for several years, then began to purchase and plant orchards, nearly all of which are now bearing. Production last year was around 80,000 barrels. There are to be found in his orchards York Imperials and substantial plantings of Stayman Winesap, Ben Davis, Grimes Golden, Delicious, Jonathan, N. W. Greenings and other varieties.

Governor Byrd takes unusual care of his orchards, using ample fertilizer, pruning the trees carefully, and especially applying every spray that is needed. Special attention is likewise given to packing, so that the "Byrd Brand" is well known throughout the trade and enjoys a high reputation. A considerable quantity of fruit is exported to England, the continent of Europe and to South America, and some is sold or consigned throughout the South and East.

In addition to his orchards, Governor Byrd is also president of the Winchester Cold Storage Company, the largest apple storage plant in the world, organized about 12 years ago, with other fruit growers of Frederick County. The first unit was built in 1917 and has a capacity of 125,000 barrels of apples; the second unit was built in 1920 with a capacity of 300,000 barrels. Within the last few months a new unit has been completed with a capacity of 165,000 barrels, giving a total capacity of approximately 475,000 barrels. Under the storage-in-



Typical Spraying Scene in Virginia



Peaches and Apples Interplanted in Rockingham County, Virginia

transit ruling of the Interstate Commerce Commission apples from all over the state may be brought to Winchester for storage. This plant also stores an average of 100 cars and 90,000 baskets of Western apples and pears.

The main plant of the National Fruit Product Company, Inc., is also located at Winchester. In 1915 the site was acquired and a plant with an annual producing capacity of 500,000 gallons of vinegar erected. Each year expansion has been necessary until the plant now has an annual capacity of 3,300,000 gallons. New buildings of steel and glass have replaced the original structure, the most modern equipment has been installed, a new unit for a canning factory added, and the making of vinegar, apple sauce and apple butter has developed into an enormous industry. The company has plants also at Martinsburg, W. Va., and at Waynesboro, Va., and it has recently acquired site for a plant at Romney, W. Va., where building operations will soon begin. These plants form a chain of factories covering the most important apple producing centers of the Cumberland - Shenandoah - Piedmont districts. The magnitude of the industry can best be comprehended when reduced to figures. Combined capacity of the plants requires nearly 100,000,000 pounds of apples annually, the equivalent of 2,000,000 bushels or 675,000 barrels. "White House" apple products have long been well known, but on March 31, 1928, the fifteenth birthday of the organization was celebrated by shipping two solid train loads of vinegar, 128 new cars just released from the shops of the Pennsylvania Railroad and loaded exclusively with National Fruit products.

Shenandoah Valley, Inc., selected Winchester as the central point of the commercial orchard area of the Valley, and adjudged it to be the logical place for an annual Shenandoah Apple Blossom festival. It is estimated that more than

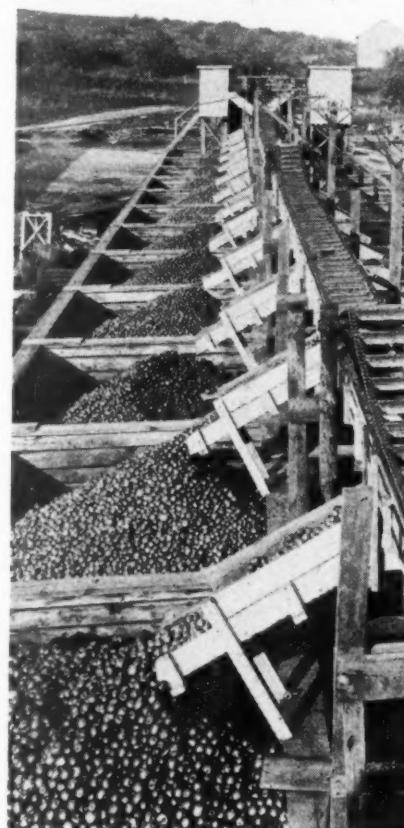
100,000 visitors come to Winchester for this occasion. The "Parade of Blossoms," in which over 5,000 school children participated last April, presented a picture of rare beauty and magnificence. The motto of the festival, "The Bounties of Nature Are Gifts from God," breathes the true spirit of the Shenandoah Valley folk. They know that "the best" of everything is to be found in their valley and unhesitatingly they declare, "Best Apples Grow in the Shenandoah."

This claim, however, is disputed by the growers of the Piedmont section. "We

grew the apples that made the Virginia product world famous," they proudly boast, and the story is worth repeating: Andrew Stevenson of Albemarle, minister to England, 1837, presented Queen Victoria with several barrels of Albemarle Pippins which had grown on his Virginia plantation. The marvelous apples so delighted the Queen that she ordered the import tax on American apples removed. And no doubt this act greatly stimulated foreign trade and gave the Virginia apple the reputation it ever afterwards has maintained, "The world's best."

The territory which constitutes the foothills of the Blue Ridge Mountain range is known as the Piedmont Section. In the five counties of Albemarle, Nelson, Amherst, Orange and Green there are 924 commercial orchards, or 22.2 per cent of the total number in the state. The sheltered coves of the beautiful Blue Ridge are ideal for growing the famous Albemarle Pippins, and it is estimated that more than 61 per cent of the Virginia plantings of this apple are to be found in this district. Albemarle County alone reports 391 commercial orchards, four of which have more than 10,000 trees each, while ten others have around 8,000 each. It must be conceded that the Piedmont section runs the Shenandoah Valley a close second in the industry, and excels all other sections in growing Albemarle Pippins, which to this day grow "to a queen's taste."

The Roanoke section, made up of Botetourt, Roanoke, Bedford, Franklin, Floyd and Montgomery counties, is perhaps next in importance. It reports 458 commercial orchards, with a total of 470,721 apple trees, or 11 per cent of the commercial plantings in the state. Soil and climatic conditions are favorable to the growing of a large variety of fruits. To supply the Roanoke market, is, however, the first consideration of the growers, and to do this they plant varieties



Storage Bins for Apples  
In the Plant of the National Fruit Product Co., Winchester

of apples that ripen over a long period of time. More than one-fourth of the early summer apples produced in the state are grown in this section; Winesap, York-Imperial, Albemarle Pippin and Stayman varieties take the lead. One orchard in Bedford county reports over 20,000 trees, four others in the Roanoke section report over 10,000 trees, but the small orchards lead, and are found to be one of the surest sources of income for the small acre farmers of this district.

In the South Valley section are the counties, Augusta, Rockbridge, Alleghany, and Bath, one of the oldest commercial producing sections in the state. Investigations show about 60 per cent of the plantings to be around 18 years old. There are approximately 314 commercial orchards, with perhaps 446,460 trees in this section, the greater number of these orchards being operated in connection with other farming. Commercial peach orchards are being planted also, the most important to be found in the Fisherville - Waynesboro district, and around Staunton. Formerly the peach trees were set as fillers in the apple

orchards, but within the last five years the industry has taken on new life, and it is not unusual to find numerous acres planted wholly in peaches.

The North Piedmont section reports that more than 95 per cent of its apple plantings are in commercial orchards. The counties Rappahannock, Fauquier, Loudoun, Culpeper, Madison, Fairfax and Prince William, are in this section, orchards being located usually 20 or 25 miles from railroads. Before the days of good roads the marketing problem was serious, and many acres that might have grown the finest apples were left uncultivated, but with good highways and motor trucks the fruit growing industry presents an entirely different prospect. Reports from this section show large recent plantings.

The other sections, the Patrick, Southwest and Middle, each have a small number of commercial orchards. Possibly around 10 per cent of the commercial plantings in the state are in these sections. It is interesting to note that during the last few years production in these counties has increased; especially

has the Delicious gained in favor and plantings.

Possibly no one factor has so stimulated the fruit growing industry of Virginia as good roads. The Old Midland Trail, which once presented a picturesque scene of covered wagons, has been converted into a great national highway, a popular road for trucks loaded with Virginia apples and peaches on their way to market or to storage plants to await more favorable market conditions.

All over the state farmers are beginning to realize that fruit growing, as a whole, is a far more profitable business than general farming. And while all fruit growers are not highly prosperous the greater number are enjoying a comfortable income.

The State Agricultural Department has done a splendid work in stimulating the industry and at present is trying to encourage the growing of smaller fruits; grapes, plums, cherries, berries and nuts; calling attention to the fact that the Virginia markets are being largely supplied with these fruits from border states.



Orchard of Towson E. Smith, Flint Hill, Rappahannock County, Va.

#### \$400,000 Lateral Gas Line

Meridian, Miss.—A contract involving the expenditure of \$400,000 has been awarded by the Southern Natural Gas Corporation, Birmingham, Ala., to W. S. Bibb, Birmingham, for building a natural gas line from a point near Louisville, Miss., to Meridian, about 60 miles. Distribution in Meridian will be through the lines of the Mississippi Service Company, operators of the local company. It is understood that communities between Louisville and Meridian may also be served. The appropriation for the line is one item in the Southern Natural Gas Corporation's 1930 program which will involve several millions of dollars. This is the first large lateral line authorized by the company since it completed its main line from Louisiana, through Mississippi and Alabama, to Atlanta, but it is thought several additional lateral

lines into important towns and cities in the Southeast will be authorized during the year.

#### Upward Trend in Soft Coal Output in 1929

Production of bituminous coal in this country in 1929 is estimated at 532,352,000 net tons, by the Bureau of Mines. In comparison with the 500,745,000 tons produced in 1928, this is an increase of 6.3 per cent. With the exception of Kentucky, all major coal-producing states shared in this increase. West Virginia, which for two successive years held the lead in soft coal output, dropped back to second place, Pennsylvania regaining the lead, although production in West Virginia in 1929 was also higher, amounting to 138,015,000 tons, an increase of 3.8 per cent over 1928.

#### Cities in Miniature

[From the Charlotte Observer.]

The Manufacturers Record has embarked on a unique bit of enterprise in presentation, each week until its list is finished, of miniature illustrations of all Southern cities of over 10,000 population, which insures wide-spread exploitation of North Carolina, for this State abounds in towns of that character. We doubt if any State in the Union can match old Tar Heel in number of towns of the "small city" class. The Record includes Winston-Salem in its initial lay-out, with Columbia representative of South Carolina municipalities. The pictures are accompanied with brief descriptive text and the whole makes publication of a more than ordinarily interesting nature. The Record has more than 200 towns on its list and it safely promises "a few surprises" in regard to the extent and diversity of their business and manufacturing activities.

## Protection of Phosphate Industry Needed

On March 17 our DAILY CONSTRUCTION BULLETIN carried a statement to the MANUFACTURERS RECORD by Senator Trammell, of Florida, to the effect that he would present an amendment to the tariff bill for a duty of \$2.00 a ton on phosphate. "At present," he said, "our phosphate industry is protected by an anti-dumping order made some years ago. This order is being contested in the courts, and should the order be revoked American phosphate producers will be at the mercy of the Morocco phosphate which is mined and sold where it meets competition very much cheaper than our phosphate can be mined and sold."

The amendment was presented but action has been deferred since the bill as a whole is to go before the joint committee of the Senate and House.

In commenting on Senator Trammell's proposal, emphasis was placed on the extreme importance of the South receiving a full degree of protection on its products, in order that it might not be placed at a disadvantage with other parts of the country in the matter of tariff protection. Morocco has vast deposits of phosphate which are being mined at a wage cost of 26 cents to 32 cents a day for labor. American mines cannot possibly compete with such slave labor rates and maintain anything like a living standard of wages.

It was also pointed out that not only is Moroccan phosphate rock produced at such extremely low wages, but it is mined under government subsidy and tax exemption, transported from the mines by government-owned railroads and handled through government-owned port facilities, as contrasted with domestic mines of the United States which pay hundreds of thousands of dollars in taxes. Not only are American workers and American investors threatened, but the investments of American railroad-owned transportation facilities in the phosphate fields and elevators on tide-water would likewise be endangered. It is estimated that the railroads' investment in track facilities in the phosphate district of Florida alone amounts to \$4,000,000.

Anthony B. Arnold, assistant to the president of the American Agricultural Chemical Co., New York, wrote under date of March 17 as follows:

"We consider the Moroccan competition very dangerous to the fertilizer industry in this country, and have sent the following telegram to the Senators of 16 states in which we have an appreciable investment:

"Senator Trammell of Florida will shortly introduce in the Senate an amendment to the tariff law placing a duty of \$2.00 per long ton on phosphate

rock to protect American phosphate mines now threatened with competition from phosphate mined in Morocco where extremely low wages are paid by the French government monopoly. Moroccan phosphate has already been introduced into this country. As large miners of phosphate in Florida and Tennessee and manufacturers of superphosphate with heavy investments in your state we urge you to support the proposed amendment. We feel the entire fertilizer industry will be irreparably injured if Morocco is allowed to destroy American phosphate mining industry. We believe domestic phosphate industry is essential to United States agriculture and if left without protection will be destroyed by the product of this low cost French monopoly; then agriculture will be dependent upon foreign phosphate, a most undesirable situation for the country."

Senator Fletcher, of Florida, in a letter to the MANUFACTURERS RECORD stating that he would support the proposed amendment to be offered by Senator Trammell to take phosphate rock off the free list and make it dutiable, enclosed with his letter a statement outlining the proposed amendment which contained in part the following:

"That Section 1640 of the Free List of the Tariff Act of 1922 providing as follows, 'Phosphates, crude and apatite' be repealed and that a provision for duty on phosphate rock be inserted into the law as follows: 'Phosphate rock (phosphorites, cellophane, and apatites), should be subject to a specific duty of \$2.00 a long ton.'

The following companies were listed as being interested:

American Agricultural Chemical Co., New York;  
Anaconda Copper Mining Co., New York;  
Armour Fertilizer Works, Chicago;  
Atlas Fertilizer Co., Columbia, Tenn.;  
Baugh Chemical Co., Baltimore;  
J. Buttgenbach & Co., Dunnellon, Fla.;  
C. & J. Camp, Ocala, Fla.;  
Charleston Mining Co., Richmond, Va.;  
Coronet Phosphate Co., New York;  
Davison Chemical Co., Baltimore;  
Dunnellon Phosphate Mining Co., Dunnellon, Fla.;  
Federal Chemical Co., Louisville, Ky.;  
Hoover & Mason Phosphate Co., Chicago;  
Independent Chemical Co., New York;  
International Agricultural Corp., New York;  
Mutual Mining Co., Brunswick, Ga.;  
National Fertilizer Assn., Washington, D. C.;  
F. S. Royster Guano Co., Norfolk, Va.;  
Ruhm Phosphate & Chemical Co., Mt. Pleasant, Tenn.;  
Schuler & Webster, Columbia, Tenn.;  
Southern Agricultural Chemical Corp., New York;  
Southern Phosphate Corp., Baltimore;  
Swift & Co., Chicago;  
Phosphate Mining Co., New York.

The foregoing firms are asking for a specific duty on phosphate rock. They cite the fact that there are enormous phosphate resources in this country. Four favorably located fields are in Florida, South Carolina, Tennessee, Kentucky, Idaho, Wyoming and Montana, with abundant supply of this essential plant food for thousands of years to insure low prices to the American consumer.

They point out that in 1927-1928 there

entered through Baltimore initial substantial imports of phosphate rock from Morocco and that Moroccan costs, including rail and water freight to Baltimore, are actually \$4.93 per gross ton less than present American costs. Morocco is selling to the United States for \$4.00 per ton while selling to the European markets, which it controls, for \$7.60 per ton.

It was also pointed out that capital investment of the American phosphate industry is \$67,000,000 and that the revenue of railroads and coastwise shipping in the transportation of domestic phosphate rock in 1927 was more than \$6,000,000.

Eighty per cent of the 3,000,000 tons of phosphate mined in this country is used here.

Where formerly American producers furnished 90 per cent of the world's supply of phosphate, export tonnage is now of no particular importance due to Moroccan competition.

The entire South has a very great deal at stake in the matter of a protective duty on phosphate. Here is a great American industry, essential to the welfare of the country, threatened by importation of free phosphate mined either by convict labor or labor paid the beggarly wages which prevail in Morocco. Surely the American people do not want to force American labor down to such starvation wages.

### Consolidate Natural Gas Properties

Charleston, W. Va.—The Twin States Natural Gas Company has incorporated in Delaware to combine 10 natural gas properties in Lincoln, Putnam, Kanawha, Cabell, Logan and Roane counties, West Virginia, and Floyd County, Kentucky. A syndicate headed by E. R. Diggs & Co., Inc., New York, will handle the financing of the company, it is said, which plans to acquire and operate properties aggregating more than 7000 acres.

### Rubber Heels on Railway Cars

To make travel in its coaches more comfortable and restful, the Baltimore and Ohio Railroad System is utilizing the shock-absorbing qualities of rubber in the operation of its service. Each truck on passenger coaches is being equipped with 51 rubber pads placed at points where the frame rests and at spring ends—wherever metal comes in contact with metal. This application of rubber tends to eliminate vibration and adds to the comfort of the passenger.

## Insane Russia

By COURTEMAY DE KALB.

The barbarities of the French Revolution were committed in the first fury of mob violence. For those excesses may be offered the excuse of intoxication with sudden freedom from restraint on the part of the masses. Far different is the case of Russia. There the masses have not revolted. A clique of middle-class men, financed by the Germans as a war measure to put the Russian armies out of commission, started a revolution, executed the Czar and his entire family, murdered all the better class of people and their sympathizers, but were not joined in their work of wholesale murder by the peasants. Prior to the World War the population of Russia was estimated at 180,000,000. Today the Soviets place the population at 150,000,000. Therefore, the vast number of thirty million people, except the few who succeeded in escaping, have been ruthlessly wiped off the map in an attempt to establish the ascendancy of the so-called Bolsheviks. This horror has been carried forward and is being carried forward today, while foolish politicians in the rest of the world are prating of peace and disarmament.

As if this were not enough, the Soviets have now been making war upon the peasants. A number of the peasants are sufficiently thrifty to have accumulated something for a rainy day, and are able to provide a few horses, cattle and farming tools. Since the Soviet government has been accustomed to commandeer almost the whole of their crops without recompense they naturally have been cultivating barely sufficient for their own consumption. Accordingly the Soviets have stepped in and have condemned these Kulaks, as the well-to-do peasants are called, under the fine misleading phrase of "liquidation," to confiscation of their lands and to the penalty of death for themselves, their wives and daughters being turned over to the licentious multitude in accordance with the principles of the Soviet state. The poorer peasants, who have nothing to lose, meantime have been provided with arms with which to go gunning for the desperate Kulaks, whose property is being converted into collective farms tilled by tractors. There is no certainty, however, that the collective farms can supply sufficient wheat, as the Soviet government has been unable to furnish

tractors fast enough, and the peril of famine looms large on the horizon.

At the same time, as all the world knows, the Soviets have declared still more active war on the churches. No vestige of religious liberty remains in Russia. The Pope recently has charged the Kremlin, which means Stalin, who is responsible for the present conduct of Russian affairs, with the prosecution of every conceivable atrocity against the Roman Catholics in that country, and these are greatly outnumbered by the adherents of the Greek Orthodox Church who are equal sufferers.

The Soviet government has suddenly awakened to the fear that the Christian peoples of the world will probably call a halt to this frightful desecration of all that has been held sacred, according to an Associated Press dispatch from Moscow on the twenty-third of February. It is amazing that concerted action has not long ago been taken to extinguish these Russian horrors. It is time that national jealousies be laid aside in a crusade against such abominations. If not soon done the germs of evil will spread from that center of infection and destroy our civilization.

## American Chemical Society to Hold Annual Meeting in Atlanta, April 7-11

The annual meeting of the American Chemical Society, which this year will be held at the Hotel Biltmore in Atlanta, April 7-11, will present a number of papers on subjects of peculiar and immediate interest to the Southeast. Dr. S. W. McCallie on "Georgia's Geological Researches of Interest to Industrial Chemists;" B. S. Brown on "Naval Stores—Past, Present and Future;" C. E. Mullin on "The Synthetic Fibre Industry of America;" W. D. Munson on "Manufacture of Chemical Cotton;" R. S. Hancock and H. E. Kaiser on "Purification of Wood Rosin;" Lauren B. Hitchcock on "Fixation of Nitrogen in Virginia;" the same authority on "Cellulose in Virginia. I—Pulp and Paper;" and R. E. Hussey and P. C. Scherer on "Rayon in Virginia" should all command close study for their bearing on the growing realization of the South's great productivity of cellulose and naval stores—a branch of the chemical industry that promises very great expansion in the South.

The program for the meeting is ar-

ranged with the care and thoroughness characteristic of these annual meetings of the American Chemical Society, and a list of the divisions into which papers will be grouped suggests the comprehensive range of the discussions. These are Agricultural and Food Chemistry, under which there will be 28 papers; Biological Chemistry, under which there will be 28 papers; Cellulose Chemistry, with 12 papers; Chemical Education, with 30 papers; Gas and Fuel Chemistry, with 10 papers; History of Chemistry, Industrial and Engineering Chemistry, Medical Chemistry, Organic Chemistry, Paint and Varnish Chemistry, Petroleum Chemistry, Physical and Inorganic Chemistry, Rubber, and finally Sugar Chemistry—making a total of 345 papers. As usual, the meeting will be so organized that several groups, allocated to as many different rooms, will be in session simultaneously. Abstracts of the papers can be furnished by A. C. S. News Service, Room 706 Mills Bldg., Washington, at \$1 per copy, check to accompany order.

## 9,000 Tons Florida Cement to Panama

Tampa, Fla.—Part of a 9000-ton shipment of Florida Portland cement has left this port for Cristobal and Panama City, Panama. The cargo, shipped by the Florida Portland Cement Company, Tampa, included 10,000 sacks consigned to private interests for commercial work and 80,000 sacks to the United States Government for construction work on the Panama Canal. Officials of the company anticipate the commercial shipment will open a new field and create an active demand for the Florida product in Latin-American markets.

## Bids on Government Hospital

Galveston, Tex.—Bids will be opened May 2 in the office of Jas. A. Wetmore, Acting Supervising Architect of the Treasury Department, Washington, to erect a new Marine Hospital here, for which \$740,000 was appropriated. The main building will be T-shaped, 3 stories, to house 100 beds and necessary facilities. Other structures will include a residence for the commanding officer, officers' quarters, nurses' quarters and garage.

## Some Major Projects of the Week

*Under the Construction Department elsewhere in this issue will be found a complete list of the week's activity in the South and Southwest, including hundreds of industrial, mining, power, transportation, building construction, and financial projects. It presents a panorama of development requiring materials, equipment and machinery of almost every description.*

### \$4,500,000 CONTRACT ON POWER PROJECT

**New Kanawha Power Company Plans**  
40,000-Horsepower Development—  
Ultimate Cost \$8,750,000

Hawk's Nest, W. Va.—The New Kanawha Power Company, New York, has awarded contract to the Rinehart and Dennis Company, Inc., Charlottesville, Va., at approximately \$4,500,000, for a big hydro-electric power project on the New River, near Hawk's Nest. Major construction items will cover a concrete dam between this point and Gauley; a concrete tunnel 3.5 miles long and 30 feet in diameter, and a power house at Gauley. Estimates place the ultimate cost of the dam and tunnel at \$8,000,000 and that of the powerhouse at \$750,000. The installed horsepower will be between 30,000 and 40,000, most of the output to be used by companies allied with the New Kanawha Power Company, a subsidiary of the Union Carbide and Carbon Company, New York.

### \$6,600,000 IRRIGATION PROJECT STARTED

#### Texas District to Reclaim 60,000 Acres

Eagle Pass, Tex.—Work has been started on the big irrigation project of Maverick County Water Control and Improvement District No. 1, which will involve construction of a main canal 90 miles long and approximately 300 miles of laterals. The water supply will be taken from the Rio Grande River and distributed by gravity over an area of about 60,000 acres with a 32-mile frontage on the river. Headgates will be constructed at each lateral and in connection with the main canal, the District plans to build a large hydro-electric plant and transmission lines to a number of towns and industries. The Ulen Contracting Company, New York, has general contract for the project and sub-contracts have been awarded to the Trinity Farms Construction Company, Dallas, at \$695,918 for earth work; to Bart Moore, Inc., San Antonio, and the Trinity Farms Construction Company, at \$605,787, for intake, rock excavation and concrete canal lining, and to Bart Moore, Inc., at \$616,108, for concrete work. W. L. Rockwell, Eagle Pass, is the engineer.

### \$8,920,000 North Carolina Bonds

Raleigh, N. C.—Bids will be opened March 31 on an issue of \$8,920,000 State of North Carolina bonds, to include the following items: Chowan River bridge, \$550,000; public buildings, \$1,000,000; schools, \$1,400,000; Great Smoky Mountain National Park, \$2,000,000; permanent improvements, \$1,970,000, and \$2,000,000 World War veterans bonds. The entire issue will bear an interest rate of 4½ per cent. bids to be received separately for each bond item.

### \$106,000,000 FOR LONG DISTANCE TELEPHONE FACILITIES

Part of \$700,000,000 Program of Bell System

Construction activities in 1930 of the Long Lines Department of the American Telephone & Telegraph Company, New York, will involve an outlay of \$106,000,000, it is announced, being a part of the Bell System program calling for an expenditure of \$700,000,000. The program provides for installation of 3000 miles of cable, more than 1,000,000 loading coils and nearly 28,000 telephone repeaters in connection with new and existing cables, while additional long distance facilities will be obtained from 750 miles of toll cable to be installed by the associated companies. Other major projects include the stringing of approximately 110,000 miles of aerial wire and the installation of carrier current telephone and telegraph systems. Relief or supplementary cables will constitute an important part of the program, the most important of these being between New York and Chicago, Pittsburgh and Terre Haute, New York via Washington to Petersburg, Va., and for about 80 per cent of the distance from Boston to New York. New cables are planned on several routes, including Terre Haute-St. Louis, St. Louis-Kansas City and Milwaukee-Appleton, Wis. Work will be started on a new route between New York and Syracuse, with the construction of new cables from Easton, Pa., via Scranton to Binghamton, N. Y. Underground conduits are being built from New York to Philadelphia, New York to Reading, Pa., Cleveland to Toledo and in other sections. New aerial wire will be strung on the Central Trans-

continental route from Kansas City to San Francisco and Los Angeles, via Denver and Salt Lake City, and about 900 miles of additional pole lines will be built in sections between Kansas City, Kans., and Wendover, Utah. Another new pole line will form a direct route between Salt Lake City and San Bernardino, Cal., a distance of 570 miles. As a final link in a fourth transcontinental line to run from Whitewater, Cal., through Kingman, Albuquerque, Trinidad, Col., and Oklahoma City, a 450-mile pole line is being built between Albuquerque and Kingman. This will relieve the Southern transcontinental route, on which various sections are now loaded to capacity. A new open wire will be built between Bangor, Me., and the proposed terminal of the transatlantic submarine cable on Cape Breton Island, Nova Scotia..

### \$3,000,000 Expenditure for Street Cars

An expenditure of more than \$3,000,000 has been announced by the United Railways and Electric Company, Baltimore, for building 150 new street cars and rebuilding 300 used cars. The company awarded a contract to the J. G. Brill Company, Philadelphia, to build 100 new cars and to the Cincinnati Car Corporation, Cincinnati, Ohio, for building 50. Cars to be reconditioned will be handled in the company's shops. The new cars will be constructed entirely to order, with a front entrance and center exit. They will cost about \$2,550,000. Of the number of cars to be rebuilt, 200 will be used to make up articulated trains, designed to accommodate a greater number of passengers and will afford easier entrance and exit. Faster motors and better braking equipment will be installed in the other 100 cars. The cost of reconditioning the cars is estimated at \$800,000. Delivery of the new cars will probably be completed by September or October.

### Contract for \$1,000,000 Bank Annex

Dallas, Tex.—Directors of the Republic National Bank have ratified a contract to the Inge Construction Company, Dallas, to erect a \$1,000,000 annex and the work of razing a building on the site of the proposed structure will begin at once.

## IRON, STEEL AND METAL MARKET

### Some Increase Hoped for in Demand for Steel

Pittsburgh, March 24—[Special.]—The decline in steel demand appears to have halted. There were sharp increases in January and a slight further increase early in February. Volume of demand is best indicated by the rate of steel production, which at the middle of February was just about 50 per cent over the low rate of December. Since then there has been approximately 10 per cent decrease in production. It is equally difficult to explain why there was such a large increase and why, when there was the increase, there should since have been a decrease just when seasonal increase would be expected and has occurred in other years.

In the last few weeks opinion has been divided as to the future, but with the present evidence that total demand is no longer engaged in declining, some confidence can be placed in the theory that with spring just arrived, bringing with it much more outdoor work, there will be an increase in the total of demand. An extensive list can be made up of steel consuming activities that are reasonably certain to increase, while the list of lines now active but with possibilities of decrease in future would be a short one.

The automobile industry has had an unfavorable turn, production, trending downward in the last week or two, when there should be seasonal increase as April or May, more commonly April, has regularly been the peak month. Such production as occurs is chiefly of the light cars and does not provide much steel tonnage.

Steel demand in connection with building has shown only a very slight increase thus far. Pipe mills note a slight increase in movement of standard or merchant pipe and there is a little more demand for sheets in connection with building, metal lath makers being mentioned in particular as placing heavier shipping orders. Nails are moving slowly despite the fact that higher prices are quoted for regular second quarter deliveries.

Fabricated structural steel lettings reported last week totaled 37,000 tons, making quite a fair week after several rather poor weeks. Total lettings since January 1 have been about 15 per cent under a year ago, which is not doing badly at all considering general conditions. The large shops are well booked but not the small shops.

The agricultural implement industry continues to run at a very high rate, as

well as at any time in the past. Tractors have come to be a very substantial part of this business, estimated in some quarters as high as 35 per cent, while there are heavy exports. Thus not all of the activity in this industry is dependent upon farmer buying.

Finished steel prices are not doing very well on the whole, for while there are no outright or quotable declines it is beyond question that in some lines there is more cutting than two or three weeks ago on moderate and large sized orders. The attempt to advance black and galvanized sheets \$2 a ton for second quarter may be said to have failed as it would be too late now to make such an advance effective. In fact, there is now shading of the old prices, from which the advance was to have been made. Merchant bars remain quotable at 1.85c and shapes and plates at 1.80c to 1.85c but these prices are frequently if not always shaded on particularly attractive orders.

The annual report of the United States Steel Corporation, issued last week, showed 9 per cent increase in production and shipments, production in 1929 being 89.2 per cent of capacity. There was an increase of 2.4 per cent in capacity, but the total increase since 1917 was only 7.2 per cent, while capacity of independents increased very greatly. The Steel Corporation now has a very extensive program of capacity increases, its expenditures in recent years having been chiefly to bring all plants to the highest degree of efficiency and economy. The report states that average prices realized on shipments to the domestic trade were 23 cents a ton higher than in 1928, while in that year there was a distinct decrease from 1927.

### Pig-Iron Purchases Continue More Active

Birmingham, Ala., March 24—[Special.]—Melters in the home territory are indicating by their purchasing of pig iron that the second quarter will see much activity in their respective lines of endeavor. The reduction of \$1 per ton in the base price of iron in the immediate section, now selling at \$14 for No. 2 foundry, was an attraction and quite a little tonnage has been distributed for delivery during the next 90 days. Shipments of iron from the territory will also be steady; the low freight rates, rail and steamship lines to the East, on the Atlantic coast, will be extended until September 30.

Cast iron pressure pipe production is improving some as shipments increase,

some of the shops here adhering to the schedule of five days a week operation with three shifts to the day. The sixth day is taken for repairing and cleaning up. Lettings of pipe have been coming in right along. The Commonwealth & Southern (power, water and gas) has let contracts in the district for 15,000 tons of cast iron pipe to be used by subsidiaries. The pipe manufacturers have purchased some iron ahead, changing a policy of hand-to-mouth method of buying, though there is no statement that the purchasing was done for any considerable time in advance. Soil pipe manufacture is also showing slight improvement, the Central Iron & Foundry Co. starting up two foundries at its Holt works, near Tuscaloosa. The soil pipe trade has been at a low ebb for some time and production has been held down. Foundries and machine shops report improvement but there has been no extensive buying of iron, even by the stove foundries.

Ingalls Iron Works Co. is fabricating steel for small additions to the plant of the Romer Stove & Range Company. American Cast Iron Pipe Company has plans for expansion this year of the Mono-cast shop. The Lamson & Sessions bolt works will be completed within the next 60 days; since the coming in of this concern there have been two mergers and the taking over of the plant of the American Bolt Company. An addition is under construction for the new plant which will do the manufacturing for the enlarged corporation in this district.

The steel market is showing steadiness, the ingot production being above 93 per cent and the finished mill operations around 75 to 80 per cent. The Gulf States Steel Company the past week completed and placed in operation the blooming mill at Alabama City, first of the major plants on the 1929 construction program, progress being noted on the plate and sheet mills. The 1930 program, which will see work running over into 1931, includes additional open hearth furnaces, another blast furnace, additional ore mines and additional by-product coke ovens. In the meantime the plans of merging, set on foot by the Republic Steel Corporation will be pushed. Already three new directors have been selected for the directorate of the Gulf States Steel, these directors being friendly to the Republic interests. The selection was officially confirmed at the meeting in Wilmington, Del. Consideration as to the stock exchange with the merger as a result is now under way, with prospects of consummation within a short while. Consideration is also being given by the Republic interests

toward merging other Southern industrial companies and announcements are reported imminent, the Republic having plans to increase the activities of the district in the steel line.

Fabricating shops are busy, much structural work being placed in this section. Research department of the Ingalls Iron Works Co. is working on further diversification of steel products and manufacture will be taken up at no distant date.

The coal industry continues slow. Natural gas has affected that industry, as did hydro-electric power. Coal production is showing decline. Coke is firm with no change on base price, \$5 for foundry coke. Production is not much under capacity, less than 200 ovens out of more than 1300 being idle.

Scrap iron and steel is slow, with prices uncertain and very little metal moving. Heavy melting steel consumers have been buying from railroads, bringing in some metal.

Quotations on pig iron and iron and steel scrap are as follows:

#### PIG IRON

No. 2 foundry, 1.75 to 2.25 per cent silicon, f. o. b. furnaces, \$14.00; No. 1 foundry, 2.25 to 2.75 per cent silicon, \$14.50; iron of 2.75 to 3.25 per cent silicon, \$15.00; iron of 3.25 to 3.75 per cent silicon, \$15.50.

#### OLD MATERIAL

Old steel axles	.....	\$14.00 to	\$15.00
Old iron axles	.....	14.00 to	15.00
Old steel rails	.....	11.00 to	12.00
Heavy melting steel	.....	10.00 to	12.00
No. 1 cast	.....	10.00 to	11.00
Stove plate	.....	10.00 to	11.00
No. 1 R. R. wrought	.....	10.00 to	11.00
Old car wheels	.....	10.00 to	11.00
Old tramcar wheels	.....	11.00 to	12.00
Machine shop turnings	.....	7.00 to	8.00
Cast-iron borings	.....	7.00 to	8.00
Cast-iron borings, (Chem)	.....	12.00 to	13.00

### Metals in General Are Stable— Lead Active

New York, March 24—[Special.]—Some of the metals dipped in prices to new low levels during the past week, to the lowest prices since 1922. Generally speaking, however, price stability was the feature of the situation. Lead business was particularly active, for consumers have become convinced that no lower prices will be attained for a long time. The lead price at London has been equivalent to 5.83c per pound, New York, whereas the New York quotation is 5.50c. Seldom are lead prices so much cheaper than abroad.

The metals to dip to new bottom levels were tin and zinc. Tin dropped to 35 3/4c per pound, spot Straits description, while zinc fell \$1 per ton to 4.90c per pound, East St. Louis, the lowest since 1922 when the valley point was 4.47 1/2c. Copper prices were unchanged, though judging by the hand-to-mouth style of purchasing, consumers still feel that a decline may materialize. Silver prices have reached a certain measure of stability. Antimony has been rather weak,

having fallen 3/4c per pound following the announcement that the Senate had abandoned the sliding scale of duty in favor of the present flat rate of 2c per pound. Antimony closed the week at 7 1/2c per pound.

Industrial conditions still leave much to be desired. Steel operations have declined again, this time to 74 per cent of capacity as against 81 per cent at the middle of February. Automobile production is slow though may be speeded when warmer weather arrives allowing for a more accurate gauging of demand. Cheap money is helping the building situation somewhat though it is by no means as brisk as a year ago.

An encouraging statement by Secretary of Commerce Lamont reports very good cooperation on the part of State Governments in the Federal Government program of construction work. Added to this will probably be attempts to remedy the unemployment situation. All of this activity should account for some consumption of the metals.

There are still evidences of competition among the metals. Stainless steel is gaining in inroads on the non-ferrous metals. Thus the new Empire State building, 85 stories high and occupying the site of the old Waldorf-Astoria Hotel in New York, is to be trimmed with stainless steel rather than with copper, brass or bronze.

It is quite possible that the smaller demand for copper in recent months is in part due to substitution of other materials. Prices of several of the metals are the lowest since the post-war depression, while copper prices stand alone for their comparative dearth. In the electrical industry of course there is very little likelihood of substitution since copper is the best electrical conductor.

Another new use for metals has come to light recently in the form of cases for spare tires on automobiles in place of the former oil cloth covers.

Copper sales for export so far this month have been about 22,000 tons, or at the rate of nearly 1000 tons daily and 300 tons daily under last month. One prominent producer of copper reports that domestic sales are the best in two months. However it is the policy of consumers to buy for immediate needs only. Very little red metal for April shipment has been purchased.

March copper statistics are expected to be unfavorable again, with a further rise in surplus stocks. However in a month or two it is expected that the trend will be plainly for the better.

Copper business is very flat by comparison with a year ago at this time. Then copper prices were advancing each day, reaching 24c per pound in the domestic market before the advance was arrested. Early in April it was falling

just as rapidly as it advanced, halting at 18c where it has been ever since. At that time consumers were ordering supplies for several months in advance as against purchases for only a few days' consumption at the present time.

Lead has been by far the most active among the metals. Consumers are convinced that the bottom of the market is here and have been purchasing feverishly, with much demand appearing for shipment late in April. About equal interest is shown by corroders, battery makers, cable manufacturers and lead pipe producers. Consumers would purchase as far ahead as May were producers willing to sell so far distant.

Tin prices are low largely because surplus stocks are so large. Tin stored in warehouses of the United Kingdom and the United States are the largest in many years, while the world's visible supply in general is abnormally large. However the March statistics promise to be more favorable, showing smaller shipments and larger American deliveries, hence consumption. Prices fluctuated narrowly around 36c per pound as a pivot last week.

Slab zinc prices have sagged further in the face of unchanged quotations for zinc ore. However during the past two weeks the sales of ore have been only half the production. It is reported that plans are afoot to curtail the production of slab zinc which is sorely needed.

### Safety in Manufacturing

Realizing that "Accidents result in a loss of time and money to both the injured employee and the company because the amount of compensation received cannot equal the worker's regular earnings, and the cost of compensation represents an expense that must be added to the business," the General Electric Company, in designing its refrigerator plant at Schenectady made safety in handling of raw materials and finished products a prime consideration.

Approximately 9 carloads of insulating materials must be handled every week. With a conveyor system, 4 to 6 men handle it. A large tonnage of steel is used also, to make the refrigerator boxes. This, likewise, is handled by an overhead, chain conveyor, from arrival through all processes of fabrication, assembly and finishing to the loading of the crated refrigerators on the outbound freight cars. This chain conveyor is approximately 5000 feet, or nearly a mile, in length. Assembly is organized in a straight line. The finished units weigh from 400 to 1100 pounds each, and that part of the conveyor which handles them is said to have some novel features. In the belief of the General Electric Company, this system assures a high degree of safety.

# HIGHWAYS AND MOTOR TRANSPORT

## States to Spend More for Highways in 1930

**Bureau of Public Roads Reports States and Counties Plan to Spend Over \$1,601,160,000**

Cooperating with President Hoover in his plea to enlarge all construction programs as much as is practicable to ameliorate the unemployment situation, the States and their counties will spend in their road building programs for 1930 at least \$250,000,000 more than they spent in 1929.

Reports received from State highway departments and compiled by the Bureau of Public Roads, U. S. Department of Agriculture, show that State and local authorities plan to spend \$1,601,167,455 for highway improvement in 1930.

The planned expenditure by State highway departments for construction and maintenance of State highways is \$937,500,455; the balance, \$663,667,000, will be spent, according to the estimates, on local roads and bridges. The State highway officials of 45 States estimate the total length of roads to be improved by them in 1930 as 32,532 miles, an increase of 3126 miles over the estimate in the 1929 programs. Three States failed to report contemplated mileages for 1930.

The highway departments of all States will control the maintenance of 281,303 miles of highways this year, an increase of 32,381 over the mileage under State maintenance in 1929. Gradually, the States are taking over into their systems for maintenance the more important county and local roads of the country.

The States of greatest population and industrialization in which unemployment, naturally, is greatest, show the highest contemplated expenditures. The Middle Atlantic States, comprising New York, New Jersey, and Pennsylvania, plan to spend \$374,835,310 on improvement of State and local roads; the East North Central States of Ohio, Indiana, Illinois, Michigan and Wisconsin plan to spend \$303,696,000.

The West North Central States, including Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, and Kansas rank third in their contemplated expenditure of \$236,461,727, and the South Atlantic States of Delaware, Maryland, Virginia, West Virginia, North Carolina, South Carolina, Georgia and Florida, with an expenditure of \$182,872,418 rank fourth; the West South Central States of Arkansas, Louisiana, Oklahoma and Texas rank fifth with an expenditure of \$154,100,000, and the Pacific States comprising Washington, Oregon and California rank sixth with an expenditure of \$121,590,000.

Kentucky, Tennessee, Alabama and

Mississippi, making up the East South Central group, plan to spend \$101,992,000 on State and local road improvement; Maine, New Hampshire, Vermont, Massachusetts, Rhode Island and Connecticut in the New England group plan to spend \$75,430,000, and the Mountain States of Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah and Nevada, \$50,190,000.

### \$1,800,000 Road Bonds Sold

**Fort Worth, Tex.**—Bonds in the amount of \$1,800,000, a portion of an issue of \$2,700,000 4½ per cent road bonds, have been sold by Tarrant County to a syndicate composed of Halsey, Stuart & Co., Inc., Chicago; Bancamerica-Blair Corporation and A. B. Leach & Co., Inc., New York; Stix & Co., St. Louis, and the Fort Worth National Company. The price was par, less a deduction under a fiscal agency arrangement, which made the net to the county 98.75.

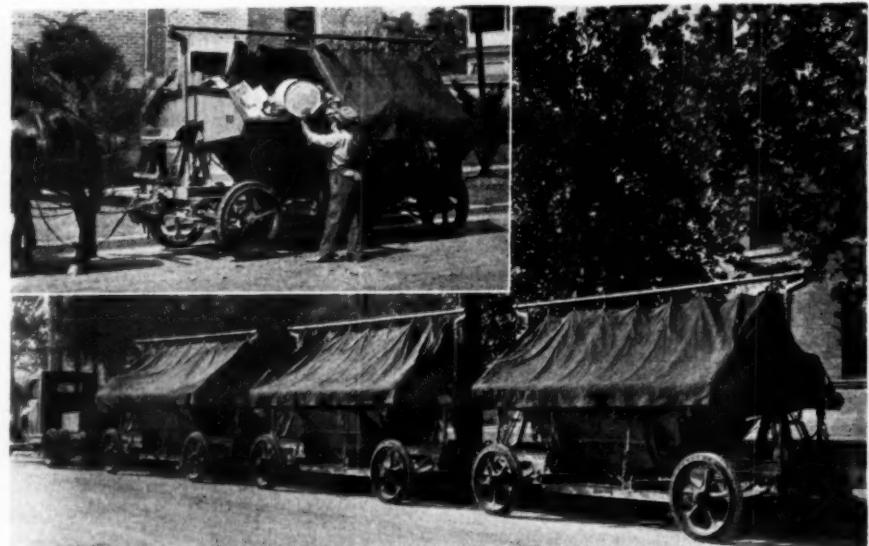
### Road and Bridge Bids

The State Roads Commission, Baltimore, opens bids April 1 on five projects involving the construction of 9.92 miles of concrete shoulders on the Defense Highway in Anne Arundel County; 3.4 miles of concrete road in Cecil County; 2.47 miles of concrete in Montgomery County; 4.2 miles of gravel in Prince George County, and about 1 mile of concrete with slag shoulders in Worcester County. Bids will be opened April 8 for a steel girder bridge over railroad tracks at Parkton in Baltimore County.

### Will Enlarge Bus Service

Plans are being made by the United Railways & Electric Co., Baltimore, Adrian Hughes, superintendent of motor bus transportation, to expand its railway-bus service. The company has ordered from the Yellow Truck & Coach Manufacturing Co., Pontiac, Mich., a subsidiary of the General Motors Corporation, Detroit, 12 double-deck buses, each with a seating capacity of 68.

## Trailers Used in Collection of Garbage



The Beaumont (Tex.) Department of Waste Collection and Disposal, Carroll Carlson, superintendent, is successfully collecting garbage by use of trailers, manufactured by the Highway Trailer Co., Edgerton, Wis. The city has a population of 67,000 and a fleet of 20 highway trailers is utilized. After the trailer has been loaded it is drawn by a team of mules to a central point and made up with others into a train and transported to point of disposal by use of a truck-tractor. It is said the equipment has made it possible to reduce collection cost and that the unit is dependable in operation, convenient in loading and sanitary.

## NEW AND IMPROVED EQUIPMENT

### Lorain Power Shovel for Heavy Duty

The Lorain 75-B, 1½-yard, heavy duty power shovel is announced by the Thew Shovel Company, Lorain, Ohio, manufacturers of shovels, cranes, draglines, backdiggers and locomotive cranes of gasoline, Diesel, electric or steam power drive. Like the ¾-yard Lorain 45, the 1-yard Lorain 55 and the old 1½-yard Lorain 75-A, the new machine is of the Thew center drive design in turntable, crawler and shovel boom. Improvements on this unit may be divided into two general classes, those on the turntable and those on crawler mounting, the former consisting of increased weight and ruggedness. Larger and more powerful power plants are provided by a Waukesha "W. L." gasoline engine rated at 97 horsepower, a 7-inch by 8½-inch Atlas Imperial Diesel, or a larger AC or DC electric motor. Any of these units may be used without major changes in the turntable.

The crawler mounting, 12 per cent longer than previously and 2300 pounds heavier, is propelled by the Thew center drive, with newly designed driving pinions, while the steering and travelling clutches are mounted on splined sections of a horizontal propelling shaft of increased diameter. The car body is a one-piece casting, heavier, with rigid radial bracing, and is capable of supporting the dead weight of the unit, plus the tipping load of a 15-ton crane at any axle support. Standard mounting has 2 self-laying crawler tread belts consisting of a total of 56 treads, and by re-

placing end rollers with equalizer rocker arms, 64- and 68-tread crawlers, 14 and 15 feet, respectively, are provided.

The center drive shovel boom has great operating ranges, the crowd motion being powered by a positive roller chain with improved take-up device. There is also an automatic crowd brake and an automatic power trip to the dipper of new design, the unit being powerful enough to handle a 1½-yard dipper on heavy duty work and a 1½-yard dipper on many other classes of work. The shovel unit, clamshell, dragline and backdigger are outstanding features among primary improvements presented by this machine.

### Rex Mix Haul

The Chain Belt Company, Milwaukee, Wis., announces the Rex Mix Haul, a new development in truck-mounted mixers, light in weight, readily portable and



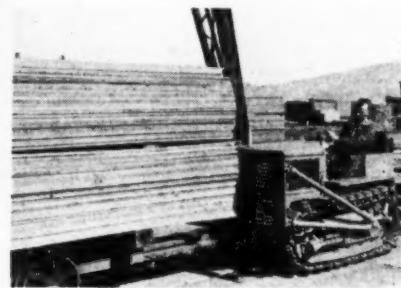
A Light Weight, Truck-Mounted Mixer

built to fit any type of truck. It is mounted low on the supporting frame, with large charging opening, variable

flow discharge chute, independent, easy-turning drum with three-point anti-friction suspension, the drum being driven by a Chabco chain. The machine is self-contained, with its own power plant and power take-off, the transmission being fully enclosed in a bath of oil. The water system is similar to that supplied on all Rex mixers. The company is distributing a pamphlet "Mix Haul Mixes While Hauling," illustrating and describing the mixer.

### Push Plate for Small Tractors

The Caterpillar Tractor Company, San Leandro, Cal., recently put on the market a push plate or front bumper for its model 10 tractor. The plate is 59½ inches wide by 34½ inches deep, the bottom edge being approximately 16 inches from the floor when the tractor is equipped with standard tracks. The push plate enables the tractor to push cars without being attached to them and is adapted to use in factories, on docks,

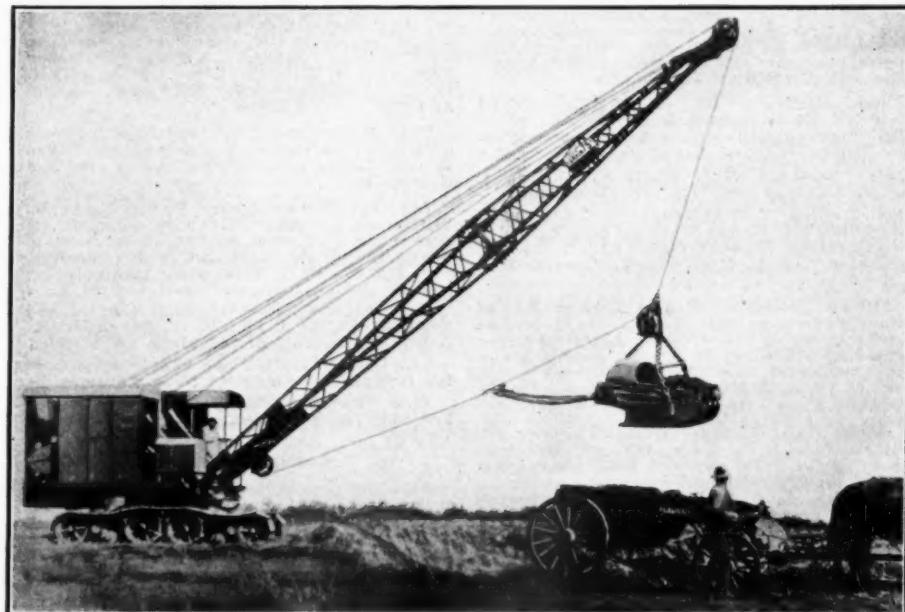


Front Bumper for Model 10 Caterpillar

wharves or loading platforms and in other capacities where boxes, bales or trailers are to be moved only a few feet.

### \$35,000,000 Flood Control Construction

Cape Girardeau, Mo.—Reports from Washington indicate that engineers are ready to proceed with \$35,000,000 of flood control construction along the Mississippi River as soon as Congress makes the funds available. The expenditure will be distributed among projects from the mouth of the river to Cape Girardeau, bringing total expenditures to date to \$89,000,000. The proposed work is not involved in the controversy over the merits of the Jadwin plan and engineers have virtually completed plans and specifications. Condemnation proceedings will be instituted at once to obtain levee and floodway rights across railroad and state highway lines in the Bonnett Carre area in Louisiana.



Larger Gas-Diesel-Electric Motors Feature This Machine

# CONSTRUCTION DEPARTMENT

## and

# NEW ENTERPRISES

Covering the initial announcements of new undertakings with additional information about enterprises previously mentioned. The date at the end of an item indicates preliminary facts were given in a previous issue.

Building and Construction Proposed and Contracts Awarded; Manufacturing, Mining, Power, and Land Developments; Public Works; Transportation; Communication; Financial Enterprises; New Business Opportunities Reported in the Sixteen Southern States.

When writing to a new firm or corporation the name of at least one of the incorporators should be placed on the envelope to expedite its handling by the local postoffice. Mail may be delayed unless complete address is given.

The Daily Construction Bulletin of the Manufacturers Record gives each business day advance news published in this weekly review. It is invaluable to those requiring prompt information. Subscription price \$40.00 a year.

### Airports, Airplane Plants, Etc.

Fla., Tampa—Engineering crews, under direction of City Engr. Cason made survey of Catfish Point, under orders of Mayor McKay to rush airport project to completion with all possible speed; topographical survey completed and majority of soil survey made, looking toward underground drainage system; no definite decision can be made on location until cost question is disposed of; \$750,000 appropriated. 2-27

Ga., Americus—Farman Aircraft Corp., American subsidiary of Farman Brothers, French airplane manufacturers, reported, acquired Southern Field for aircraft production center and flying school; 25-passenger craft to be first produced, biplane, powered with 2 motors; begin operations in large warehouse and later erect modern plant; plan turning out completely assembled planes within 60 days; will maintain general offices in New York; Henry Farman, of parent company, to come to America and assume presidency; Harrison R. Tucker, V.-Pres., 1425 S. Quaker St., Tulsa, Okla., in charge of sales and distribution; officials of preliminary organization said to include: Preston S. Arkwright, Pres., Georgia Power Co.; Clark Howell, Jr., both Atlanta; Frank Lanier, Americus, and Cason Callaway, Lagrange; Frederick R. Couder, Jr.; Walter H. Bowes, Pres., Pitney-Bowes Postage Meter Co., 11 W. 42nd St.; William T. Thomas, Aeronautical Engr., and K. D. Johnson, Pres., K. D. Johnson & Co., all New York.

Ga., Atlanta—Southern Air Transport, Inc., Fort Worth Natl. Bank Bldg., Fort Worth, Tex., Lee Sanders, Local Div. Mgr., soon start erecting \$25,000 hangar, Candler Field; 1 story, 75x115 ft., steel, brick, stucco; include storage space, shops, stock rooms, waiting rooms, etc. 1-23

La., Alexandria—City, V. V. Lamkin, Mayor, plans improving airport, including improved highway from city to field, filling station, rest rooms, telephone booth, etc.

La., Shreveport—See Sewer Construction.

Miss., McComb—Chamber of Commerce approved plan of Park Comsn. to acquire site and establish airport.

Okla., Henryetta—Arkoma Airway Corp., H. E. Russell, Pres., recently formed to operate air lines, plans erecting hangar and offices.

Okla., Tulsa—Braden Steel Corp., Madison and Admiral St., has contract for addition to main hangar, Garland Airport; 20 x 93 ft., 2 story.

Okla., Tulsa—Curtiss Flying Service, 27 W. 57th St., New York, negotiating to acquire aviation holdings of R. F. Garland; establish state headquarters here; maintain flying school at Garland Airport, 8 mi. from city, Broken Arrow Hwy.

Tex., Houston—Office of E. W. Libbey, Ch. Clk., Div. of Supplies, Washington, D. C., opens bids Apr. 11 for Kingsville-Houston section of Brownsville-Houston Airway, extending via Sinton, Victoria and Wharton, approx. 230 mi.; consists of installing about 22 standard electric revolving beacons mounted on 51-ft. or other height galv. steel skeleton towers together with other necessary appurtenances and accessories; 6 of the revolving beacons to be installed at intermediate landing fields together with boundary lighting systems.

Va., Lynchburg—City, R. W. B. Hart, City Mgr., opens bids Mar. 29 for hangar at municipal airport; 80x60 ft., all metal; alternate bids to be taken on hangar 60x60 ft.

### Bridges, Culverts and Viaducts

#### Proposed Construction

Fla., Miami Beach—Cty, C. W. Tomlinson, Clk., plans expending \$70,000 for bridges over waterways; E. R. Neff, City Engr. See Financial News Columns.

Ky., Louisville—Kentucky & Indiana Terminal R. R. Co., W. S. Campbell, Gen. Mgr., prepared plans for proposed elimination of grade crossings; providing elevated structure of 2 tracks, 60-ft. clear span at Broadway; city will depress streets, and close Thirty-first St., from point south of River Park Dr. to Magazine St.

La., Bastrop—Morehouse Parish plans 4 bridges. See Roads, Streets, Paving.

Maryland—State Roads Comsn., Baltimore, received low bid for 2 bridges: Prince George's County—extend conc. bridge over Paint Branch, Baltimore-Washington Blvd., at College Park, W. C. Briddell Co., 19 E. Lombard St., Baltimore, \$12,969; Baltimore County—substructure for proposed bridge over tracks of Pennsylvania R. R. at Parkton. T. A. Ward, 1425 Linden Ave., Baltimore, \$28,272; G. Clinton Uhl, Chmn. 2-27, 3-6

Maryland—State Roads Comsn., Baltimore, advises surveys and plans prepared on tentative line, for grade elimination at Rockville; contract for overhead structure 1000 ft. west of existing grade crossing at Kensington, not yet awarded due to rights-of-way; prepared plans for overhead structure 200 ft. west of present grade crossing, Galtersburg, pending, on account of rights-of-way; H. D. Williar, Jr., Ch. Engr.

Md., Baltimore—Bd. of Awards received low bid from Sanford & Brooks Co., \$676,987, for Pennington Ave. bridge, over Curtis Creek; H. G. Perring, Consln. Engr. 3-6

Md., Parkton—State Roads Comsn., Baltimore, receives bids April 8 for fabrication and erection of all structural steel for superstructure of proposed steel girder bridge over tracks, Pennsylvania R. R. Co., at Parkton; Cont. B-137-43; G. Clinton Uhl, Chmn.

Miss., DeKalb—Kemper County Bd. of Supvrs. receives bids April 7 for 2 bridges and approaches: One 3-span Legette Bridge; one 3-span Blackwater Bridge; approaches to present bridge over Pawtucfaw Creek; 2200 lin. ft. piling, 34,800 ft. treated lumber; P. H. Pipkin, Engr.

Miss., Holly Springs—Marshall County Bd. of Supvrs., J. T. Wade, Clk., receives bids April 8 for 3 bridges and road: 50-ft. post trestle bridge between Tasker and Red Banks, Dist. No. 1; 60-ft. post trestle bridge on Wasaw road, Dist. No. 3; 300-ft. bridging on Wall Hill and Byhalia road, Pigeon Roost Bottom, Dist. No. 4; 2 mi. gravel Barton and Olive Branch road, Dist. No. 3.

Miss., Iuka—Tishomingo County Bd. of Supvrs., O. J. Bullen, Clk., receives bids April 7 for bridge across Southern R. R., Safrans Ave.

Miss., Lexington—Holmes County Bd. of Supvrs., G. Ashley, Clk., receives bids April 7 for bridge across Cypress Creek, near Ellison's gin; across Harland's Creek at Earl Covington's place; 2 bridges on Thornton and Stonewall road, 105 ft. long.

Miss., Rolling Fork—Sharkey County Bd. of Supvrs., W. H. Carroll, Clk., receives bids April 7 for bridge over Deer Creek, north of Blanton.

Miss., Sardis—Panola County Bd. of Supvrs., L. S. Manning, Clk., receives bids April 6 for 3 bridges: 75-ft. bridge on West Channel, Scott Bottom, Canton road; 110-ft. on John Brewer road, on channel through John Taylor place; 110-ft. on Walton's Chapel school house road across McIvor Creek drainage canal.

North Carolina—State Highway Comsn. receives bids for 3 bridges. See Roads, Streets, Paving.

N. C., Charlotte—City, R. W. Rigsby, Mgr., receives bids, April 8 for underpass, under tracks of Southern Ry. on North Tryon St.; plans paving street through underpass; total cost over \$75,000. See Financial News Columns.

Tennessee—Dept. of Highways and Public Works, receives bids for 12 bridges. See Roads, Streets, Paving.

Tenn., Gallatin—War Dept., Washington, D. C., approved plans Dept. of Highways and Public Works, Nashville, for bridge across Cumberland River, southeast of Gallatin. 2-20

Tex., Fort Worth—Tarrant County Commsr. Court, plans letting contract about April 1 for 36-ft. wide conc. bridge over Clear Fork on Stove Foundry road; preliminary plans for 3 of other 14 lateral road bridges: Twelfth St. Bridge; Arlington-Grapevine Bridge over Trinity River; Randal Mill Bridge, Arlington-Randal Mill road; Damon A. Davis, County Engr.

Tex., Harlingen—Piper and Tate interests announce construction of international bridge in near future south of Harlingen, over Rio Grande River.

Tex., Houston—Southern Pacific Lines, R. W. Barnes, Ch. Engr., Houston, plans single span conc. and steel bridge across Buffalo Bayou Dr. on old G. H. and S. A. main line, cost \$10,000; 60-ft. thin plate girder, conc. piers.

Tex., Sweetwater—City Plan Comsn. and Texas & Pacific R. R., E. F. Mitchell, Ch. Engr., Dallas, considering plans for viaduct.

Va., Luray—Town plans expending \$26,000 for bridge. See Financial News Columns.

West Virginia—State Road Comsn. received low bids for 5 bridges. See Roads, Streets, Paving.

#### Contracts Awarded

Ala., Birmingham—City Comsn. let contract to Gould Contracting Co., Independence Bldg., Nashville, for track elevation, Fourteenth St. underpass; A. J. Hawkins, City Engr. 3-6

Ga., Atlanta—MacDonald Construction Co., Peachtree Bldg., has contract, \$59,650 for reconstruction of southern span, of conc. and steel Forsyth St. viaduct for city of Atlanta. 3-6

Okl., Oklahoma City—City, M. Peshek, Clk., let contract to Tom Green, 125 S. Cle-  
gen St., Oklahoma City, \$225,000, for Ex-  
change Ave. Viaduct over North Canadian  
River; W. W. Small, City Engr. 2-13

Texas—State Highway Comsn., let contracts for 2 bridges. See Roads, Streets,  
Paving.

Tex., Houston—Don Hall, Cotton Exchange  
Bldg., contractor for \$101,000, Houston Ave.  
underpass, will start construction within 30  
days. 10-24

### Canning and Packing Plants

Ga., Woodbury—Hills Bros., 110 Washington  
St., New York City, reported, enlarge  
pimento canning plant.

La., Hammond—L. Weinberg, Manhattan  
Kosher Dill Pickle Co., 1053 Washburne  
Ave., Chicago, Ill., reported, interested in  
establishment of pickle plant.

La., Lafayette—Trappey Brothers Canning  
Co. install machinery in former Baldwin  
Lumber Mill for vegetable canning plant;  
daily capacity 2000 cases.

Tex., Nacogdoches—East Texas Canning  
Co., capital \$60,000, incorporated; Roland  
Jones, W. C. Gillean.

### Coal Mines and Coke Ovens

Ky., Barbourville—Anchor-Jellico Coal Co.,  
recently formed, acquired 4000 acres Brush  
Creek coal land; leased property to Knob-  
Jellico Mining Co., Barbourville, install  
\$500,000, 40-car capacity mining plant; Arte-  
mus-Jellico R. R. Co., M. H. Davidson, Pres.,  
528 Walnut St., Cincinnati, Ohio, construct  
2-mi. extension; line extending 12 mi.; Arte-  
mus to Brush Creek coal fields to be extended  
10 mi. toward Jellico during year; mining  
town to be established at center of operations,  
15 mi. from Barbourville; railroad and  
mining engineers started operations and erection  
of mining plant to follow. 3-13

### Concrete and Cement Plants

Fla., Tampa—Florida Portland Cement  
Co. soon operate plant a full capacity;  
plans increasing loading and docking facilities,  
etc., costing \$80,000.

### Cotton Compresses and Gins

Ark., Searcy—Federal Compress Co., A. J.  
Matthews, Pres., Russellville, reported, acquired  
Searcy Compress Co.

La., West Monroe—Roosevelt Gin Co., Inc.,  
capital \$20,000, incorporated; Ed. L. and A.  
V. Saucier, both Riverton.

La., Wisner—T. B. Gilbert & Co., reported,  
construct 2 gins, consisting of one 5 stand  
Murray gin and one 5 stand Continental  
gin; steel and galv. iron with conc. floors  
and foundations; install oil burning engines.

Tex., Corpus Christi—J. A. Walsh, County  
Club Place, reported, low bidder at \$79,000  
for third unit at Aransas Compress; 1 story,  
conc. fire walls, wood and steel sash, corrugated  
siding, asphalt floors, etc.; storage  
unit addition of approximately 30,000 bale  
capacity. 3-20

Tex., MacLean—E. R. Tinsley, Shamrock,  
reported, construct fireproof cotton gin.

Tex., Robstown—Robstown Community Gin  
Co., capital \$25,000, incorporated; G. H. McDonald,  
C. E. Herring.

### Drainage, Dredging and Irrigation

Louisiana—See Miscellaneous Enterprises.

Miss., Senatobia—Comms. of Strayhorn  
Drainage Dist., Office of Chancery Clk., opens  
bids Apr. 7 for 13 mi. open ditch excavation,  
involving approx. 325,454 cu. yd. earth (drag-  
line work); W. A. Birdsong, Engr., P. O. Box  
484, Clarksdale.

Tex., Edinburg—Hidalgo County Water  
Control & Improvement Dist. No. 12 voted  
\$5,500,000 bonds for irrigation system to  
serve 90,000 acres north of here; has permit  
for taking water from Rio Grande. 3-13

Tex., Freeport—U. S. Engr. Office, Gal-  
veston, has low bid from Atlantic, Gulf &  
Pacific Co., 15 Park Row, New York, at  
\$124,800, for dredging 1,810,149 cu. yd. place  
measurement from within specified limits,  
180,851 cu. yd. overdepth, Freeport Harbor. 2-20

Tex., San Benito—Election to be held Apr.  
9 at office of Rice Tract Irrigation Co., with  
following officers in charge to create Cameron

County Water Improvement Dist. No. 16, to  
comprise Rice tract, owned by Clark &  
Hutton; R. M. Clark, J. I. Proudlove, Mrs.  
B. B. Clark and Pauline Hernandez.

Virginia—U. S. Engr. Office, Norfolk, opens  
bids Apr. 8 for dredging approx. 281,855 cu.  
yd. sand and mud and removing 2170 cu.  
yd. rock in place in Appomattox River.

### Electric Light and Power

**Electric light and power work in connection  
with many LAND DEVELOPMENT  
operations involves the expenditure of large  
sums of money. See that classification for  
details.**

Ala., Jasper—C. J. Benson, Tulsa, Okla.,  
reported, applied for franchise; construct  
power plant and distribution system.

Ark., Paragould—W. A. Fuller Co., Engrs.,  
2016 Shenandoah Ave., St. Louis, Mo., submitted  
report of detailed preliminary survey  
and estimated cost of electric light, power  
and heat plant in connection with city's  
water system; cost \$225,000. 2-13

D. C., Washington—A. B. Heaton, Archt.,  
1211 Connecticut Ave., N. W., will open  
bids March 28 for 5 story storage and distribut-  
ing plant for Potomac Electric Power  
Co., 14th and G Sts., N. W. Following con-  
tractors estimating: Bahen & Wright, 916  
Rhode Island Ave., N. E.; Davis, Wick &  
Rosengarten Co., 1406 G St., N. W.; De-  
Sibour Construction Co., 1200 15th St., N.  
W.; Samuel J. Prescott, Inc., 814 13th St.,  
N. W.; Skinner & Garrett, 1719 I St., N.  
W.; Arthur L. Smith, 2525 Pennsylvania  
Ave., N. W.; Charles H. Tompkins Co., 1608  
K St., N. W.; R. P. Whity Co., Denrike  
Bldg.; C. Wahlgemuth, Jr., 2108 16th St.,  
N. W., and George E. Wyne, 2525 Pennsyl-  
vania Ave., N. W. 3-13

La., Ferriday—Louisiana Power and Light  
Co., Algiers, reported, expend \$10,000 for  
rebuilding entire distribution system; work  
under direction of Troy Stark. 1-30

Md., Baltimore—Stockholders of Consolidated  
Gas, Electric Light & Power Co., Lexington  
Bldg., vote April 2 on ratifying sale to  
company property and assets of Wood-  
bine Light & Power Co.; on increasing total  
authorized amount of capital stock from 1,  
200,000 shares of common stock and 300,000  
shares of preferred stock to 2,000,000 shares of  
common stock and 500,000 shares of pre-  
ferred stock, to be classified as preferred  
stock, Series A.

Miss., Yazoo City—General Electric Co.,  
800 Constance St., New Orleans, La., reported,  
has contract for turbo generator unit at  
light plant. 3-13

Mo., Cape Girardeau—See Water Works.

N. C., Sylva—Nantahala Power & Light  
Co., J. E. S. Thorpe, Calderwood, Tenn., re-  
ported, plans constructing 85 ft. power dam  
on Tuckasagee River in Jackson County, 20  
miles from here; contemplates other develop-  
ment in Swain county; company advises  
transmission line from Nantahala to Andrews  
under construction; railroad about  $\frac{1}{4}$  completed.

South Carolina—South Carolina Power Co.,  
Charleston, advises construction work this  
year will be largely rehabilitation of prop-  
erties acquired last year; Dixie Construc-  
tion Co., King & Wentworth Sts., will take  
care of work, including ordering of sup-  
plies and equipment named. 1-23

S. C., Bamberg—South Carolina Power Co.,  
Charleston, negotiating for franchise and  
power plant, subject to ratification by people  
May 6.

Tennessee—J. Elliott Hall, Pres., American  
Utilities Co., Inc., 17 S. High St., Columbus,  
O., announced purchase of Alamo Power and  
Light Co., Crockett Mills Light Co. and  
Maury City Electric Co., all located in Crockett  
County, also that all outstanding shares  
of capital stock of Gibson Light and Power  
Co., serving Gibson, has been purchased;  
properties will probably be transferred to  
Tennessee Electric Co., subsidiary of Ameri-  
can Utilities Co., Inc.; improvements and ad-  
ditions planned for Alamo and Maury City  
properties, details to be announced later. 3-13

Tenn., Lexington—Tennessee Electric Power  
Co., Chattanooga, reported, negotiating for  
municipal light plant.

Tex., Estelline—West Texas Utilities Co.,  
Abilene, reported, construct substation, ex-  
tend transmission line to Turkey, serve Quita-  
que and Flomot. 11-28

Tex., Port Arthur—City, C. B. Moore, Fi-  
nance Comsn., reported, considering estab-  
lishing light and power plant; later plans  
extension of street lighting to Griffing, Del.  
Mar., Lake View, etc.

Tex., Stratford—West Texas Utilities Co.,  
Abilene, reported, acquired properties of  
Municipal Electric & Water Co., subject  
to ratification by people in April.

Virginia—Virginia Public Service Co.,  
Charlottesville, reported, extend power line  
from Meherrin to Green Bay; construct line  
from near Boston to Union Level.

Va., Danville—City votes April 22 on elec-  
tric and gas plant franchise; rejected former  
bids. 3-20

Va., Martinsville—Appalachian Electric  
Power Co., Bluefield, W. Va., reported, negoti-  
ating for light and power plant, telephone  
system.

W. Va., Fairmont—J. M. Jencks, Engr.,  
Wheeling, submitted proposal to city for sur-  
vey for city lighting plant.

### Foundry and Machine Plants

Ark., El Dorado—El Dorado Foundry Ma-  
chine & Supply Co., formed by merger of  
El Dorado Foundry & Machine Co. and Ellis  
Iron Works; engage in manufacturing and  
repairing oil well and sawmill machinery,  
supplies and equipment.

Fla., Miami—Davis-Olson Co., 50 N. W.  
21st Ave., chartered; R. N. Davis, 1144 S. W.  
19th Ave., C. O. W. Olson.

Okla., Oklahoma City—American Tank Co.,  
1520 E. Seventh St., subsidiary of Black,  
Sivals & Bryson, Inc., Bartlesville, Okla., let  
contract to Chas. M. Demming Construction  
Co., Inc., for substructure for all-welded  
plant to manufacture welded tanks and weld-  
ed pressure vessels for oil business; 140x260  
ft., 45 ft. high, 2 bays, 80 ft. wide for 10-ton  
crane, and 60 ft. wide for 5-ton crane; al-  
most entirely of arc welded construction;  
fabrication by Kansas City shops of Black,  
Sivals & Bryson Mfg. Co.; struc. steel erection  
and roofing contracts not let; field super-  
vision by Brown & Myers, Petroleum  
Bldg.; engineering by Black, Sivals & Bryson  
Mfg. Co., 700 E. 10th St., Kansas City, Mo.,  
G. Raymond in charge. 3-20

Tenn., Chattanooga—Cole Mfg. Co., 3218  
S. Western Ave., Chicago, Ill., and Southern  
Stove Works, Evansville, Ind., considering  
sites for large stove foundry.

Tex., Houston—Midwest Piping & Supply  
Co., Inc., 1450 S. Second St., St. Louis, now  
erect \$250,000 plant, Bringhurst and Cline  
St., to fabricate large pipe; 24,000 sq. ft. floor  
space, offices to occupy separate building;  
employ 50 to 100; plans beginning operations  
about May 1.

Tex., Newlin—F. D. Roan Machine Co.,  
changing name to Southern States Cotton  
Machine Co.

### Garages and Filling Stations

Ala., Anniston—King Motor Co., 110 E.  
11th St., let contract to Johnson Construc-  
tion Co., Birmingham, for \$50,000 repair and  
motor sales building.

Ark., Jonesboro—Lyle Tire Co., Jimmy  
Lyle, let contract to W. W. McDaniel for  
service station; started razing buildings on  
site; 96x80 ft.

Ark., Fort Smith—Dr. C. S. Holt, care  
Holt Clinic, 1020 1/2 Garrison Ave., plans filling  
station, Schuetzen Park Addition; brick,  
private plans.

D. C., Washington—American Oil Co.,  
American Bldg., Baltimore, acquired Penn  
Oil Co., 133 Pennsylvania Ave., N. W., in-  
cluding 65 service stations in District of  
Columbia and nearby points in Maryland  
and Virginia, plans improvements.

D. C., Washington—Standard Oil Co. of  
New Jersey, Standard Oil Bldg., Baltimore  
Md., erect 3 filling stations; 1-story, brick;  
Connecticut Ave. and Veasey St., plans com-  
plete, taking sub-contract bids; 18th and  
Rhode Island Ave., plans nearing completion;  
Conduit and Reservoir Rd., plans com-  
plete, taking sub-contract bids; private  
plans, owner builds.

Fla., Daytona Beach—Ray Green Motor  
Co., incorporated; S. B. Green, 126 1/2 Magnolia  
Ave.; H. O. Watson.

Fla., Kissimmee—Autrey Motor Co., incor-  
porated; D. L. Autrey.

Fla., Orlando—Dale Foster, Inc., charter-  
ed; Dale Foster; filling station.

Fla., Orlando—Shell Petroleum Products  
Corp., Lynch Bldg., Jacksonville, and Shell  
Bldg., St. Louis, Mo., acquired site for filling  
station.

Md., Baltimore—Leach-Kirwan-Tyler, Inc., 4006 Belvedere Ave., chartered; Charles Kirwan; deal in motor vehicles.

Md., Baltimore—Shell Eastern Petroleum Products, Inc., Court Square Bldg., preparing plans for \$40,000 service station, Charles and 21st St.; will let contract; private plans.

Miss., Gulfport—Brewer Motor Co. acquired site, Court St. for new building.

Mo., Kansas City—Scarritt Estate, C. W. Scarritt, Scarritt Bldg., let contract to J. E. Taylor, Reliance Bldg., for \$25,000 service station, 2530 Grand Ave.; 1 story, brick; R. H. Sanneman, Archt., Lee Bldg.

Mo., Springfield—Link Motor Supply Co., 410 St. Louis St., capital \$75,000, incorporated; John W. Kastler, 623 E. Delwood St.

Mo., Yazoo City—Woolwine & Hull, Ford dealers, open bids Apr. 4 for garage, Washington St.; 1 story, 140x100 ft., steel frame, brick, stone trim, rein. conc. foundation, plate glass windows, built-up, comp. roof, steel and iron work; N. W. Overstreet, Archt., Mississippi Fire Insurance Bldg., Jackson, Miss.

N. C., Marshall—Service Motor Sales, Inc., capital \$50,000, incorporated; A. W. Whitehurst, A. Z. Whitt.

N. C., Rocky Mount—Lee's Service, Inc., capital \$25,000, chartered; W. R. Lee, Fred D. McCauley.

Okla., Oklahoma City—Geo. M. Swisher, Colcord Bldg., let contract to E. C. Ross & Son, Washington and Robeson St., for \$30,000 super service station; fireproof, steel deck, built-up asphalt roof, 60x140 ft., 2 story, terrazzo and conc. floors; Firestone Tire & Rubber Co., Akron, Ohio. Lessee: plans by A. C. Davis & Sons, Shawnee, and Geo. M. Swisher. 3-13

S. C., Union—Roy Meador erecting filling station, W. Main St.

N. C., Winston-Salem—Baggs Buick Co., incorporated; Hoke S. Baggs, 544 Oaklawn St.

Tenn., Nashville—Stockell Motor Co., 1503 Broad St., capital \$200,000, incorporated; H. L. Garrett.

Tex., Beaumont—Nick Marino and Frank Parigi, 1075 Pine St., acquired site, Pine and Main St., for filling station.

Tex., Beaumont—Homer Walker acquired Lloyd Shell Co., Inc., 795 Liberty St., with garage and service station, Liberty Ave. and Alamo St.

Tex., Dallas—Walter C. Cameron Motor Co., 808 N. Harwood St., capital \$102,000, incorporated; Walter C. Cameron.

Tex., Dallas—Robertson Tire Service, Inc., capital \$15,000, chartered; Bates Robertson, 4430 Cedar Springs St.

Tex., Fort Worth—Following have sub-contracts in connection with \$250,000 building for Firestone Service Stores, Inc.: Rein steel, North Texas Iron & Steel Co., 1401 N. Adams St.; struc. steel, same; Tilework, Good Marble & Tile Co., 117 S. Jennings St.; Misc. and orna. steel and iron, Lowry Ornamental Iron Studio; terrazzo, American & Ventian Marble Co.; sheet metal, Collinsville Mfg. Co., 1003 E. Front St.; lath and plaster, B. C. Gordon, 2913 May St.; millwork, Stevens Sash & Door Co., 100 S. Adams St.; painting, D. C. Downs, Capps Bldg.; electrical, Ashe Electrical Co., 505 Jones St.; screens, Agee Screen Co., 419 S. Summit St., all Fort Worth; plumbing and heating, J. C. Korioth Plumbing Co., Sherman; over-head doors, Over-head Door Sales Co., Hartford City, Ind.; Thos. S. Byrne, Inc., Gen. Contr., Fort Worth Natl. Bank Bldg.; E. G. Withers, Archt., Holmes Bldg. 1-23

Tex., Fort Worth—Empire Development Co., let contract to Quisle & Andrews, 2212 W. Seventh St., at \$13,984, for filling station, Seventh and Cherry St.; 1 story, brick; Wyatt C. Hedrick, Inc., Archt., First Natl. Bank Bldg.

Tex., Houston—Consolidated Oil Co., 2905 McKinney St., let contract to M. C. Parker & Co., 7027 1/2 Harrisburg St., for \$10,000 service station, Almeda Rd. and Wheeler Ave.; frame, stucco; Lamar & Cato, Archt., Bankers Mortgage Bldg.

Tex., Karnes City—McClane Motor Co., capital \$30,000, incorporated; S. S. McClane, R. C. Youngblood.

Tex., Lubbock—Consumers Oil Co., Inc., capital \$12,000, chartered; A. R. Hendricks, G. E. McCleveley, Jr.

Tex., Perryton—Perryton Buick Co., capital \$25,000, incorporated; F. P. Ragers.

Tex., San Antonio—Johnson Bros. Auto Co., Clyde B. Johnson, 210 Seventh St., opens

bids Apr. 3, office of Archt. for garage addition; 1 story with mezzanine, approx. 40x50 ft., struc. clay tile and rein. conc. conc. floor; plumbing and wiring included in general contract; painting under separate contract; Will N. Noonan Co., Archt., Bldrs. Exch. Bldg. 3-20

Va., Staunton—Myrtle Oldsmobile Co., Inc., chartered; W. M. Bass, Jr.

Va., Norfolk—Cadillac-LaSalle Co., capital \$40,000, chartered; H. A. Williams, Jr., Law Bldg.

Va., North Tazewell—North Tazewell Garage, Webster Harman, rebuild burned garage.

W. Va., Clarksburg—De Luxe Service, Inc., Charles P. Boughner, Mgr., subsidiary of Firestone Tire & Rubber Co., Akron, Ohio, started erecting super service station, W. Main and S. Fifth St.; 2 story, conc., steel tile, face brick; Claude Tetrick, Gen. Contr., 201 Ryder Ave.

W. Va., Stollings—Elk Refining Co., Huntington, leased 5 gasoline stations, Logan County; start remodeling and repainting program at once; erect branch distributing warehouse here; Ed Vorpe, Huntington, named local manager with headquarters here.

### Gas and Oil Enterprises

Ark., Dardanelle—City, reported, voted against granting gas franchise to M. W. Greenson. 2-13

Ky., Hawesville—Faultless Oil & Gas Co., capital \$32,000, incorporated; C. J. Kuebler, George H. Egbert.

Ky., Morganfield—Tradewater Oil Co., Marion, M. N. Boston, Pres., construct bulk plant and service station.

Ky., Somerset—V-G Oil and Gas Co., incorporated; John Gossett, F. T. Vaught.

La., Vinton—Adams Oil Co., Inc., capital \$50,000, chartered; J. D. Adams, Beaumont, Tex.; S. J. Welsh, Vinton.

Miss., Meridian—Southern Natural Gas Corp., Watts Bldg., Birmingham, Ala., let contract to W. S. Bibb, Brown-Marx Bldg., Birmingham, Ala., for construction of natural gas line from near Louisville to Meridian, construction completed about June; line will be 60 miles long, supply Meridian with natural gas; probably supply communities between Louisville and Meridian; steel pipe ordered from United States Steel Corp., 71 Broadway, N. Y.; expected that several additional lateral lines into important towns and cities of southeast will be authorized during the year; distribution of gas in Meridian will be through mains of Mississippi Service Co., operators of local company. 3-20

Mo., Sugar Creek—McClintic-Marshall Co., Oliver Bldg., Pittsburgh, Pa., reported, has contract for 750 tons steel for power house for Standard Oil Co. 5-233

Oklahoma—Phillips Petroleum Co., Bartlesville, reported, acquired 2 gasoline plants in Burbank oil field, from Mid-Kansas Oil & Gas Co., Finlay, Ohio, capacity of plants 11,000 gals.

Oklahoma—Moody-Seagraves, Esperson Bldg., Houston, Tex., reported, closed contract with A. O. Smith Corp., Milwaukee, Wis., for 900 miles of pipe in connection with line proposed from Stevens county field in Kansas to points in Eastern Nebraska and Iowa; D. B. Cogswell, Pres., Missouri Valley Gas Co., will have charge of project; Fred M. Legge, Jr., former president of Magnolia Gas Co., will be consulting engineer; Missouri Valley Gas Co. has 325,000 acres of producing properties in Stevens and Morton counties, Kansas, and Texas county, Oklahoma.

Oklahoma City—Victor H. Smith, 1725 S. Newpost St., Tulsa, reported, acquired Caravan Oil & Refining Co.'s properties in Oklahoma City, capacity 5,000 bbls. crude oil daily; plant will be operated by Gulf States Petroleum Corp., organized by Victor H. Smith and associates.

Tenn., Nashville—Memphis Natural Gas Co., Memphis, reported, extend pipe lines to Nashville and Chattanooga, Jackson and Brownsville.

Texas—Electric Bond & Share Co., 2 Reator St., New York, announced purchase of Texas and Louisiana natural gas properties of Magnolia Petroleum Co., Magnolia Bldg., Dallas, subject to approval of respective Board of Directors; Magnolia Gas Co., subsidiary of Magnolia Petroleum Co. (controlled by Standard Oil Co. of New York); Moody-Seagraves and associated interests will be substantially interested in new company; plans is conditioned upon exchange of outstanding common and preferred stocks of United Gas Co. and of its bonds, debentures

and preferred stock of its subsidiaries for securities of new company; plans also provides for exchange of Louisiana Gas & Fuel Co., City Bank Bldg., Shreveport, La., shares for those of new company; holding company will be formed by Electric Power & Light Corporation.

Tex., Electra—Texas Co., 720 San Jacinto St., Houston, reported, acquired Continental gasoline plant; 2 unit, 600 gal. daily capacity; will be connected with Texas Co.'s plant northwest of city.

Texas—Pure Oil Co., Goodhue Bldg., Beaumont, offering \$20,000,000 10-yr. 5 1/2% sinking fund gold notes, through Guaranty Co. of New York; proceeds to be used for construction of pipe line from Company's new field in Van Zandt county to its refinery at Smiths' Bluff, to fund company's floating debt incurred for commencement of this operation and for other corporate purposes. 3-20

Texas—Harry Stekoll, Tulsa Trust Bldg., Tulsa, Okla., reported, acquired producing properties of Goldline Oil Corp., Braniff Bldg., Oklahoma City, Okla., in Hutchinson County of Texas Panhandle.

Tex., Pampa—Wilcox Oil & Gas Co., 603 S. Detroit St., Tulsa, Okla., reported, negotiating for Pampa Refining Co.'s plant, daily capacity 3000 bbls.

Tex., Pampa—North Fork Oil Production Co., capital \$60,000, incorporated; E. E. Reynolds, H. G. Forster.

Tex., San Antonio—Sal Oil & Gas Co., incorporated; T. J. Ahern, 127 Ostrom Drive.

Tex., Taylor—McNeill and Matthews, Inc., chartered; J. C. McNeill, D. C. Matthews.

Tex., Vernon—Magnolia Petroleum Co., Magnolia Bldg., Dallas, reported, build pipe line connecting company's main system in Wichita County with Atlantic Co.'s lease in Zacaquista field; 30 mile long, 6-in. pipe, capacity 15,000 bbls. daily.

Tex., Wichita Falls—Progressive Oil Co., capital \$120,000, incorporated; L. W. Popp, Seymour Coleman.

Va., Danville—City has plans in tentative form for expansion of gas plant; estimated cost \$15,000. 3-20

Va., Narrows—Commonwealth Public Service Corp., 105 W. Adams St., Chicago, Ill., reported has 30 yr. gas franchise.

Va., Portsmouth—Portsmouth Gas Co., 512 High St., reported, plans expending \$15,000 at Washington St. plant for erection of second sphere gas container of 100,000 cu. ft. capacity.

West Virginia—Appalachian Gas Corp. offering \$2,500,000 6% debentures through P. W. Chapman & Co., Inc., 42 Cedar St., New York, proceeds to provide extensions and developments and for acquisition of property; company through subsidiaries supplies natural gas to public utility and industrial companies, including United Fuel Gas Co. (subsidiary of Columbia Gas & Electric Corp., 61 Broadway, N. Y.), Hope Natural Gas Co. (subsidiary of Standard Oil Co. of New Jersey, 26 Broadway, N. Y.), Owens-Illinois Glass Co., Alton, Ill., and Libby-Owens Glass Co., Toledo, Ohio; properties owned or controlled by Appalachian Gas Corp. are located in West Virginia, Kentucky and Ohio; Union Management and Engineering Corp. will supervise (under direction of respective boards of directors) operation of all companies in Appalachian Gas Corp. group; operations of Memphis Natural Gas Co., Memphis, Tenn., are under same supervision. 5-20

West Virginia—Duquesne Gas Corp., reported, formed by affiliation of Standard Oil Co. of New Jersey, 26 Broadway, N. Y., Standard Gas & Electric Co., 231 S. LaSalle St., Chicago, Ill., American Water Works and Electric Co., 50 Broad St., N. Y., and Columbia Gas & Electric Co., 61 Broadway, N. Y.; company will be a holding company to take over certain of natural gas properties in 40,000 acres land in Western Pennsylvania and West Virginia, included in new company are Peoples Natural Gas Co., and Columbia Natural Gas Co., said to be subsidiaries Standard Oil Co. of New Jersey; Equitable Gas Co., controlled by Standard Gas & Electric Co., 231 S. LaSalle St., Chicago, Manufacturer's Light & Heat Co., and Greensboro Gas Co., both subsidiaries of Columbian Gas and State Line Gas Co., subsidiary of West Penn Electric Co., 500 Broad St., N. Y., which is controlled by American Water Works and Electric Co.; properties which last year produced more than 2,600,000 cu. ft. of gas are in Preston County, W. Va., and Armstrong, Alleghany, Westmoreland, Washington, Greene and Fayette Counties, Pa.; syndicate of bankers headed by Furland & Co., Inc., 52 Wall St., New

York, reported, offering issue of \$4,000,000 first mortgage 6% convertible gold bonds for acquiring section of property and development.

W. Va., Charleston—Twin States Natural Gas Co., reported, formed by combination of 10 natural gas properties in Floyd County, Ky., and Lincoln, Putnam, Kanawha, Cabell, Logan and Roane Counties in West Virginia; company will acquire and operate properties totaling approximately 7000 acres; purchasers of natural gas in this territory include: Kentucky West Virginia Gas Co., subsidiary of Standard Gas & Electric Co., 231 S. LaSalle St., Chicago, Ill.; South Penn Oil Co., 541 William Penn Way, Pittsburgh, Pa.; Clendenin Gasoline Co., subsidiary of Union Carbide & Carbon Co., Birmingham, Ala.; Warfield Natural Gas Co.; Central Kentucky Natural Gas Co., and United Fuel Gas Co., subsidiaries of Columbia Gas & Electric Corp., 61 Broadway, N. Y. and Godfrey L. Cabot, Inc., Boston, Mass., E. R. Diggs & Co., Inc., 46 Cedar St., N. Y., reported handling financing.

W. Va., Huntington—Dr. A. J. Pickering, 505 20th St., install gasoline pump, Fifth Ave. and 20th St.

W. Va., Welch—McDowell County Court, reported, rejected application of Amere Gas Utilities Co., 3130 Hall St., St. Louis, Mo., for franchise to lay gas mains over, across and along county highways.

### Ice and Cold-Storage Plants

Ala., Atmore—State Bd. of Administration erect cold-storage plant, Moffet State Prison Farm near Atmore.

Fla., Jacksonville—Florida Fruit & Produce Co., N. Dwoskin, Mgr., 416-420 W. Bay St., plans erecting large terminal cold-storage plant.

La., New Orleans—Pelican Ice & Storage Co., Ltd., 1550 St. Louis St., install additional equipment, including power generating equipment.

La., Shreveport—D. Fazio, Harts Island Road, plans \$10,000 ice plant, Line Ave. Alley near Marshall St.; 1 story, 25x50 ft., brick, rein. conc.; E. A. George, Archt.

Md., Cambridge—Atlantic Ice Co. plans rebuilding plant and installing machinery.

S. C., Burton—Enterprise Ice & Mfg. Co. erect addition and alter plant.

S. C., Charleston—John B. Howe erect ice plant; 1 story, basement, rein. conc., struc. steel, brick, comp. roof; Simons & Mayrant Co., Peoples Bldg., estimating on general contract; plans by York Ice Machinery Co., 412 Houston St. N. E., Atlanta, Ga.

Tenn., Knoxville—Your Ice Co., capital \$100,000, incorporated; Robert S. Young, Burwell Bldg.

Tenn., Memphis—Memphis Cold Storage Warehouse Co., 99 S. Front St., erect addition and improve warehouse.

Tex., Edna—Central Power & Light Co., Frost Natl. Bank Bldg., San Antonio, soon start erecting 20-ton ice plant; red brick, white stone trim.

Tex., Houston—Edmundson Refrigerating Co., 2002 Main St., erect cold-storage warehouse.

Tex., Memphis—West Texas Utilities Co., Abilene, erect \$75,000 ice plant; 17 ton.

### Iron and Steel Plants

W. Va., Wheeling—Wheeling Tube Co., recently formed by law firm of Schmidt, Hugus and Laas, Central Union Bldg., now erect \$100,000 plant, McMechen, Wheeling suburb, between 10th and 12th St., for fabricating welded steel tubing to be used for bedsteads, conveyors, vacuum cleaners, gas pipes, automobile parts, etc.; install machinery costing \$75,000; construct side track from main line of B. & O.; officers and directors for organization purposes include Robert W. Nelson, Mgr., Ohio Valley Industrial Corp., Central Union Trust Co., Bldg.; H. G. Hall, Toledo, Ohio, and third to be selected; employ 2 shifts of 100; produce 2000 tons tubing monthly.

### Land Development

D. C., Washington—Apex Realty Co., capital \$100,000, incorporated; Earl Carson, Southern Apts.

Fla., Daytona Beach—E. L. King, 1235 S. Atlantic Ave., reported, plans improvements to Seabreeze Golf course; purchased land for additional 9 holes.

Fla., Miami Beach—City voted bonds for purchase Miami Beach golf course and for extension water works. See Financial News Column.

Fla., Miami—Flagler Golf Course, incorporated; W. M. Huber, Congress Bldg.

Fla., Miami Beach—Watson & Garris, Civil Engineers, Inc., 300 Hill Bldg., N. E. First St. at First Ave., Miami, in charge of development work at Indian Creek Golf Club, advises work contemplated in connection with this project includes water supply system, 12,000 ft. of 12-in. cast iron pipe line to connect with water system of city; reservoir and swimming pool; distribution system for golf course now in process of being laid out; street lighting system, telephone and power lines, possibly in conduit; Malcolm Pirnie, 25 W. 43rd St., New York City. Consul. Engr. with Watson & Garris on water system, pool, etc.

Fla., Tampa—Davis-Webb Holding Co., incorporated; C. E. Webb, 801 E. Lafayette St.

Ky., Louisville—Winhugh Realty Co., capital \$125,000, incorporated; T. M. Winter-smith, 215 W. Oak St.

La., Lake Charles—Three Pine Farm Co., Inc., capital \$20,000, chartered; Paul Zimmerman, 1805 Madison Ave.

La., New Orleans—Vanzet Realty Co., Inc., capital \$20,000, chartered; J. F. McCormick, 4627 S. Clairborne Ave.

La., Pleasant Hill—Sam Miguel Oil Corp., capital \$125,000, incorporated; J. M. Brodges.

La., Shreveport—Fullilove Estate, Inc., capital \$75,000, chartered; J. H. Fullilove, P. O. Box 157.

Md., Baltimore—City, Bd. of Awards, received low bid from McNichol Paving & Contracting Co., 1923 Cherry St., Philadelphia, \$64,125, to grade Broening Park; 225,000 cu. yd. grading; Nathan L. Smith, Highways Engr.

Md., Baltimore—City, Winfield F. Courts, Park Engr., plans developing Mount Pleasant Park on Hillen Rd. for 18 hole golf course.

Miss., Macon—J. M. Summerville and W. E. Barrett, Aliceville, Ala., reported, acquired 1800 acres fertile prairie lime belt land; develop stock farm and agriculture.

Mo., Jefferson City—City Park Bd. develop playground; Henry Crevett, Sec., receiving bids for excavating.

N. C., Charlotte—Commercial Properties Corp., capital \$100,000, incorporated; P. E. Thomason, Piedmont Bldg.

N. C., Wilson—J. S. Whitehead & Woodward, Inc., chartered; J. S. Whitehead, 106 Goldsboro St.

Oka., Oklahoma City—City plans development of park on Park Place.

Tex., Abilene—National Realty Co., increased capital to \$35,000.

Tex., Houston—Southgate, Inc., John A. Embry, Pres., 1501 W. Alabama St., reported, let contract to Gale Brothers, for storm sewer in development of Southgate, subdivision; Gulf Bitulithic Co., 2820 Polk St., for paving, conc. base and asphalt toppings.

Tex., Jasper—Pinecrest Realty Co., capital \$20,000, incorporated; W. P. and Garland Smith.

Va., Lynchburg—A. W. Mosby, 922 Harrison St., reported, acquired 305 acre apple orchard on Locke's Mountain.

### Lumber Enterprises

Fla., Perry—Wilson Land & Timber Co., capital \$50,000, incorporated; John Shippen, A. G. Wilson.

Fla., Tallahassee—Florida Hickory Co., capital \$25,000, incorporated; E. L. Brown, W. L. Colson.

Ga., Sparta—Peden & Gassert Lumber Co. plans rebuilding planing mill burned with \$10,000 loss.

La., Alexandria—H. D. Foote Lumber Co., Inc., H. D. Foote, Vaughan Plant, advises secured planing mill facilities of Roy C. Martin Lumber Co. until burned plant can be rebuilt; plan erecting mill modern in every respect.

Tenn., Memphis—DeSoto Hardwood Flooring Co., 977 Sledge St., increasing capital, \$150,000 to \$225,000.

Tex., Austin—Cash Lumber Co., capital \$20,000, incorporated; Geo. H. Harrington, 1615 Pearl St.

Tex., Dalhart—J. Fred Phillips and H. C. Coleman, acquired Coe & Parks Lumber Co.; to be operated as Coleman-Phillips Lumber Co.

Tex., Beeville—Higginbotham Lumber Co. let contract to Martin & DeLoach for 2 lumber sheds, S. St. Mary's and East Houston St.; 50x140 ft.

Tex., Dimmitt—Wilson & Son Lumber Co., capital \$39,000, incorporated; H. G. Leonard, O. Stephens.

### Metal-Working Plants

Va., Richmond—American Can Co., 120 Broadway, New York, operating plant on Venable St., Church Hill, reported, erect \$1,000,000 plant, Everett St., just off Petersburg Turnpike; acquired site; American Can Co. wires: "Building no factory Richmond this year; prospective plans too indefinite."

### Mining

N. C., Marion—English Knob Holding Co., Inc., chartered; D. W. Adams, Old Fort; J. L. Morgan, Marion; mineral lands, mining claims, etc.

Va., Winchester—Walter R. Talbot, Winchester, started developing large glass sand deposit, western part Frederick County; excavations made and rock outcrops disclosed glass sand on over 100 acres; W. R. Talbot, personally finance project of installing machinery or form private corporation for purpose.

Tenn., Chattanooga—Hovey C. Clark II, 66 Broadway, New York, acquired all holdings of Durham Coal & Iron Co., including large real estate and mining property in Soddy and Rhea, Marion, Bledsoe and Sequatchie Counties, Tennessee, and Dade and Walker Counties, Georgia; Georgia holdings included Durham Coal & Coke Co.

### Miscellaneous Construction

Fla., Fort Lauderdale—Broward County Port Authority, H. F. MacMinn Secy., takes bids about Apr. 10 to 15 for \$50,000 wooden relieving platform, Port Everglades, between Tollywood and Fort Lauderdale; includes 1185 ft. type A platform of timber piles, 12x12 in. caps, 10x12 in. stringers, 8x12 in. blocks and 4 in. flooring; 1655 ft. type B platform of vertical piles, 12x12 in. caps, 10x12 stringers, 4 in. flooring, with necessary drift bolts, spikes and miscellaneous hardware, and secured to steel sheet piling bulkhead wall by 1 1/4 in. rods; square edge dense yellow pine or No. 1 structural Pacific Coast Douglas fir lumber; pine piling, minimum 12 in. butt, 7 in. at small end; bidders to date include: Harrison Construction Co., 500 N. E. 45th St.; Ebsary Foundation Co.; M. F. Comer Bridge and Foundation Co., 1050 Biscayne Blvd., all Miami; Frazier and Stone, Fort Lauderdale.

Fla., Tampa—See Concrete and Cement Plants.

Ga., Macon—City, G. Glen Toole, Mayor, defeated \$150,000 bonds for incinerator. 1-23

Louisiana—See Miscellaneous Enterprises.

La., New Orleans—Bd. of Port Comms., New Court Building, let contract to O'Brien Construction Co., Q. & C. Bldg., at \$74,623, for extension of Bertel system of cotton handling to 87 compartments of public cotton warehouse; system evolved by C. A. Bertel, 4535 S. Galvez St., provides for storing cotton in vertical rows held in position by wooden uprights; overhead cranes can remove any desired bale from compartment with little disturbance to rest of cotton.

La., New Orleans—Concrete Steel Co., 42 Broadway, New York, has contract for 7800 tons rein. steel for Lake Pontchartrain sea wall; Orleans Dredging Co., Canal Bank Bldg., Gen. Contr.; W. R. Davey, Acting Ch. Engr.; E. C. Hyatt, Engr., in charge of work.

Md., Baltimore—Geo. R. Morris Organization, Morris Bldg., construct conc. swimming pool and frame bath houses, 5728 Falls Rd.; total \$125,000; owner builds.

Mo., Butler—Farmers Elevator Co. of Rockville, capital \$15,000, incorporated; C. M. Rapp, Gates Merryfield, both Rockville.

Mo., Waverly—U. S. Engr. Office, Postal Telegraph Bldg., Kansas City, opens bids Apr. 1 for constructing 3340 lin. ft. standard pile clump dikes, Missouri River, Waverly Bend, 1 mi. from here.

Okla., Sayre—City Council votes Mar. 31 on \$261,000, \$33,000 for building jetties to divert channel of North Ford of Red River which menaces south of town.

Tex., Amarillo—A. B. Borger, reported, announced plans for 1,000,000-bu. grain elevator in Amarillo, and 15 small elevators along Santa Fe and Rock Island lines in Panhandle to be used as feeders of Amarillo terminal.

Tex., Corpus Christi—City, Glen R. Blackburn, City Engr., has low bid from Superior Incinerator Co. of Texas, Wilson Bldg., Dallas, at \$32,500, for 80-ton incinerator. 3-20

Tex., Dallas—Harbin-Dunaway Construction Co., incorporated; J. B. Dunaway, 3211 Cornell St.

Tex., San Angelo—City, W. C. Younge, City Engr., acquired site for \$35,000 incinerator, to be in operation in 90 days; call bids in few days. 10-10

W. Va., Charleston—Retaining Wall—See Roads, Streets, Paving.

### Miscellaneous Enterprises

Ala., Gadsden—Coosa River Transportation Co. changing name to Coosa-Alabama Navigation Co., capital \$100,000; incorporators include C. A. Cox, T. S. Williams.

Ala., Montgomery—Producers Wood Preserving Co., Louisville St., plans enlarging creosote plant, North Montgomery.

Ark., Eureka Springs—Ray Freeman acquired Highland Cave, near city limits, for recreation and amusement center.

Fla., Crescent City—Crescent City Amusement Co., incorporated; C. H. Preston, R. Patience.

Fla., Dade City—Banner Publishing Co. incorporated; W. Thomas, L. A. Guessaz.

Fla., Dania—Dania Construction Co., Inc., chartered; R. J. Davis, Anderson.

Fla., Jacksonville—City Comsn. opens bids Apr. 14 for triple combination pumping engine, fire hose, extinguishers, aerial hook and ladder truck, etc. See Want Section—Bids Asked.

Fla., Miami—Johnson Battery & Electric Co., incorporated; P. D. Johnson, 55 N. W. 47th St.

Fla., St. Petersburg—Robbins Fruit Co., Inc., capital \$25,000, chartered; S. H. Mann, Jr., M. Barton, both First Natl. Bank Bldg.; bottle fruit juice.

Fla., Sulphur Springs—Sulphur Springs Beef Co., Inc., chartered; G. Stingberg, R. Rottenberg; livestock.

Ga., Atlanta—Trinity Quality Shop, 365 Boulevard N. E. (furniture repair and upholstering), let contract to G. H. Butler, Glenn Bldg., for addition to plant; 1 story, basement, approx. 40x220 ft., cone, footings, brick walls, stone trim, built-up roof, plate glass, tile and terrazzo floors; private plans.

Ga., Atlanta—NuGrape Co. of America, 354 Nelson St., S. W., acquired Mavis Bottling Co. of America, 140 Cedar St., New York; deal confirmed by stockholders of Mavis. 3-20

Ga., Macon—Swift & Co., Union Stock Yards, Chicago, W. J. Kielbey, Local Mgr., erect addition to dairy products plant; brick, mill type.

Ga., Savannah—Star Laundry, 121 Bay St. West, installing 4 presses, washers and rug cleaning equipment from American Laundry Machinery Co., Ross & Sections Ave., Cincinnati, Ohio. See Want Section—Machinery and Supplies.

Ky., Bellevue—Bell-Day Review Publishing Co., incorporated; D. W. Briggs, W. C. Tharp.

Ky., Harlan—Beck Electrical Repair Co., capital \$20,000, incorporated; T. M. Gibson, George L. Michael.

Ky., Louisville—Sam S. Wyly has permit for \$20,000 ice cream plant, 1400 S. Shelby St.

Ky., Louisville—Stockholders of Inter-Southern Life Insurance Co. vote on Apr. 7 on recommendation of directors to increase capital, \$1,250,000 to \$3,000.

Ky., Louisville—Kentucky Dairies, Inc., capital \$50,000, incorporated; A. B. Sawyer, St. Matthews St.

Ky., Louisville—Associated Cleaners & Pressers, incorporated; Dr. H. E. Mechling, 109 Kennedy Court.

Louisiana—S. P. Spark, White Bear Lake, Minn., acquired 31,300 acres marsh lands for muskrat farm; expend approx. \$100,000; will dam property and open canals through tract; soon begin work; negotiating for additional acreage near New Orleans.

La., Lafayette—Lafayette Steam Laundry, Inc., D. D. Blue, Mgr., has low bid from J. B. Mouton, Lafayette, at \$22,000, for laundry, Lafayette and E. Convent St.; probably let contract to low bidder; Wm. T. Nolan, Archt., Canal Bank Bldg., New Orleans. 3-13

La., New Orleans—Jiffy Cleaners, Inc., chartered; Horace S. Duclos, 605 N. Alexander St.

Md., Baltimore—Hinde & Dauch Paper Co., 253 Decatur St., Sandusky, Ohio, manufacturer of corrugated paper produces, reported, plans \$75,000 branch plant to produce corrugated shipping containers.

Miss., Columbus—Nehi Bottling Co., A. T. Howard, Pres., let contract to D. S. McClanahan & Son, Columbus, for bottling plant, Sixth St., brick, fireproof, rein. steel, 1 story, 50x105 ft., 5250 sq. ft. floor space, circular roof, plate glass front; to be completed by June 1.

Mo., Kansas City—Alpine Silver Fox & Mink Ranch, Inc., capital \$20,000, chartered; John Krahenbuhl, Jr., 40th & Gould Sts.

Mo., Kansas City—Riviera Cleaners, Inc., 4308 Mill Creek Parkway, capital \$25,000, chartered; Charles R. Ottman.

Mo., Nixa—Missouri Cheese Co., incorporated; M. G. Luecke, Nixa; Fred H. Luecke, Warrensburg.

Mo., St. Louis—Click Products Co., First Natl. Bank Bldg., capital \$20,000, incorporated; J. M. Lederer; candy, coin vending machines, etc.

Mo., St. Louis—Heave Ho Tov Co., incorporated; Erwin Kauffmann, 1399 Blackston St.

N. C., Chapel Hill—Cobb & Homewood, Inc., capital \$50,000, chartered; Collier Cobb, Jr., Roy N. Homewood; construction work.

N. C., Durham—Durham Coca-Cola Co., W. K. Rand, 210 Church St., let contract to T. H. Lawrence, Erwin Apts., Durham, for \$90,000 bottling plant; 2 story and basement, rein. conc., struc. steel, brick, tile, stone trim, comp. roof, steel sash and doors; private plans. 2-27

N. C., Durham—Fuel Oil Equipment Co., capital \$50,000, incorporated; George F. Messner, 2310 Club Blvd., Durham; I. W. Summerlin, Chapel Hill; manufacture heating apparatus of all kinds.

N. C., Mount Airy—Mount Airy Ice Cream Co., capital \$50,000, incorporated; R. T. Smith, W. G. Hill.

N. C., New Bern—C. Walker Hodges Dredging Co., Inc., chartered; A. V. Hodges, R. H. Eagle.

N. C., Wilmington—Cape Fear Amusement Co., capital \$25,000, incorporated; J. C. Roe, Oleander St.; operate amusement devices.

Okla., Enid—Adams Bros. Home Dairy has permit for \$20,000 building, 118 S. Washington St.

Okla., Oklahoma City—Oklahoma City Senic Co., Bruce Settle, Pres., 2728 Classen Blvd., erect plant and office, Eighth St. and Missouri Ave.; 135x150 ft., 2 story, brick, steel; firm ships stage curtains, scenery, drapes, etc., for theatres, school auditoriums, etc.

Okla., Tulsa—Arkansas River Sand Co., W. E. Rogers, Pres., McBriney Bldg., expending \$10,000 dismantling plant and moving it to new location; lay 1240 ft. track.

S. C., Greenwood—Kraft-Phenix Cheese Corp., 400 Rush St., Chicago, soon start erecting plant with own engineering and construction forces; 1 and 2 story, conc. footings, brick, stone trim, built-up roof; F. P. Shaw, Supt. of Construction.

S. C., Greenville—Carolinas Life Insurance Co., A. H. Kohn, Sr., Woodside Bldg., advises regarding report that company acquired Great American Life Insurance Co., Walker Bldg.: "We bought the Great American Co.'s debts; these will be consolidated with our company; we did not merge." 3-20

S. C., Hartsville—Hartsville Mattress Co., J. J. Harris, Pres., Atlanta, Ga., formed to manufacture mattresses, rebuild old mattresses and do general upholstering.

Tenn., Knoxville—Avondale Farms Creamery, Inc., A. I. Smith, Pres., Hall X Road, formed by merger of Avondale Farm Creamery, Hall X Road; Tennessee Valley Creamery, 200 Deaderick Ave.; Elmore Milk Co., 107 Luttrell St. and Lily of the Valley Creamery, 1414 Sixth Ave.; other officials include F. A. Elmore, V. Pres.; Ross Smith, Sec-Treas.

Tenn., Murfreesboro—Clark Dairy Products Co., Inc., capital \$35,000, incorporated; Riley Clark, J. D. Sims; soon begin erect-

ing plant to be in operation by May 15; plans chain of creameries in towns surrounding Rutherford County.

Tenn., Memphis—W. H. Monsarrat, Inc., Exchange Bldg., incorporated; W. H. Monsarrat, T. L. Hobson; manufacturing chemists.

Tenn., Old Hickory—E. I. du Pont de Nemours & Co., Wilmington, Del., advises regarding report that company would expand \$2,000,000 expanding rayon and cellophane plants: "DuPont Rayon has no plans for enlarging Old Hickory plant; enlargement of new cellophane plant under consideration, but not yet authorized."

Tex., Marlin—Fountain Service Station, Inc., capital \$15,000, chartered; P. E. Fountain, Robert F. Higgins.

Tex., Palestine—Palestine Printing Co., capital \$15,000, incorporated; D. J. Price.

Tex., Panhandle—Carson County Creamery Co., capital \$20,000, incorporated; F. J. Hollcroft.

Tex., San Antonio—Prest-O-Lite Co., Inc., 30 E. 42nd St., New York, opens bids Apr. 1 for plant and warehouse, Cassiano St. and Southern Pacific tracks; 1 story, struc. steel, brick, conc. foundation; private plans.

Tex., San Benito—Grisham Ice Cream Co., Ben Grisham, Corpus Christi, erect \$15,000 ice cream plant; 40x70 ft.

Tex., San Perla—Great Southern Packing Co., capital \$50,000, incorporated; H. D. Campbell, Carl Hitchcock.

Tex., Temple—Newman Dress Factory changing name to Favorite Dress Co., Inc.

Va., Danville—P. Lorillard Co., Inc., Committee on Manufacture, A. Reifner, Secy., advised regarding recent acquisition of plant of American Tobacco Co., no expenditures to be made, plant in complete working order.

Va., Hopewell—Atmospheric Nitrogen Co., 61 Broadway, New York, reported, plans expending \$18,000,000 at once expanding plant, construction to be started within one month; construction machinery and materials assembled on ground; started erecting office; ammonia plant to be increased 100%, nitrate plant 50%, with proportionate enlargement of gas and electric plants; Stone & Webster Engineering Corp., 49 Federal St., Boston, Mass., reported, supervise construction work.

W. Va., Clarksburg—Rolland Glass Co., Eugene Rolland, Pres., plans extensive alterations and installing grinding and smoothing process in plant of Lafayette Window Glass Co., Northview, adjoining present plant.

W. Va., Huntington—Bonita Glass Corp., 1502 Adams Ave., capital \$25,000, incorporated; John E. Jenkins, Union Bank Bldg.

### Motor Bus Lines and Terminals

La., Lake Charles—Southland Greyhound Lines, Dave Wolzinger, San Antonio, Tex., erect \$35,000 bus depot, Broad and Bilbo St.; 1 story, 70x150 ft., hollow tile, Spanish type; plans drawn; soon begin construction.

Md., Baltimore—United Railways & Electric Company, Adrian Hughes, Supt. of Motor Bus Transportation, Court Square Bldg., ordered 12 double-deck buses, involving \$185,000, from Yellow Truck & Coach Mfg. Co., Pontiac, Mich., subsidiary of General Motors Corp., Detroit, Mich.; 68 seats.

N. C., Fayetteville—McKethan Transportation Co., capital \$25,000, incorporated; transport school children; W. J. McKethan.

Oklahoma—John Cox, Ada, applied to Corporation Comsn., Oklahoma City, for permission to operate bus line between Ada and Holdenville via Sasakwa; L. M. Blasdel, Buffalo, applied for permission to transport passengers between Lavern and Oklahoma-Kansas line via Alva and Buffalo; C. O. White, 1312 S. Elgin St., Tulsa, for class B freight permit.

### Railways

Ky., Barboursville—See Coal Mines and Coke Ovens.

La., Springhill—Louisiana & Arkansas Ry. Co., E. F. Salisburg, Ch. Engr., Minden, construct line, Springhill to Cartersville oil field, North Bossier Parish; work to be started at once; Will E. Hall, 318 Columbia Ave., Shreveport, has about 3 mi. of track built from Lela, connecting with St. Louis-Southwestern, as part of 12-mi. line into field and trackage being laid by his crews at rate of about 1 mi. daily.

Mo., Birmingham—Chicago, Rock Island & Pacific Ry. Co., W. H. Peterson, Ch. Engr., Chicago, Ill., advises recently let contract

to John Marsch, 1307 Wrightwood Ave., Chicago, for constructing 12-mi. section of new line between Coburn and Birmingham. (See Polo, 12-19)

Mo., St. Louis—St. Louis-San Francisco Ry., J. M. Kurn, Pres., authorized by Interstate Commerce Comsn. to assume obligation and liability of \$8,085,000 of equipment trust certificates, series DD, to be issued by Interstate Trust Co., New York; plans purchasing following equipment: Ten steel baggage cars at \$20,045.48; 5 steel baggage and mail cars at \$22,595.73; 5 steel baggage and mail cars at \$22,434.33; 3 steel dining cars at \$39,508.88; 1000 50-ton steel-underframe box cars at \$2,278.71; 300 50-ton steel-underframe automobile cars at \$3,306.28; 700 50-ton steel-underframe gondola cars at \$1,911.35; 20 type 2-8-2 freight locomotives at \$108,119.15. 12-19

N. C., Cliffside—L. R. Powell, Jr., Pres., Seaboard Air Line Ry. Co., Norfolk, Va., advises regarding report that company will acquire Cliffside R. R. Co.: "There is no foundation for this rumor." 3-20

### Railway Shops and Terminals

N. C., Monroe—Seaboard Air Line Ry. Co., W. D. Fauchette, Ch. Engr., Savannah, Ga., let contract to Wadesboro Construction Co., Wadesboro, for machine shop and engine repair unit. 3-6

Tex., Morse—Chicago, Rock Island & Pacific Ry. Co., W. H. Petersen, Ch. Engr., Chicago, Ill., advises let contract to D. L. McDonald for 2 wells, Morse and Dumas Road, between Dalhart and Morse, to Railroad Water & Coal Handling Co., 608 S. Dearborn St., Chicago, Ill., for equipping wellss. 3-20

### Roads, Streets and Paving

In connection with LAND DEVELOPMENT large sums are expended for roads, streets, paving and sidewalks. Details will be found under that classification.

#### Proposed Construction

Ala., Alabama City—City receives bids soon for conc. sidewalks, paving and gutter projects, cost about \$13,000.

Ala., Alabama City—City Council plans conc. sidewalks on Kyle Ave. from Dwight Sq. east to Black Creek on Gadsden Ave.; will sell bonds.

Ark., Camden—State Highway Comsn., Little Rock, making survey of State Highway No. 4, from Camden to Nevada County line; will let contract soon for graveling road.

Arkansas—State Highway Comsn., Little Rock, plans Highway No. 64 north of Missouri Pacific R. R. between Plumerville and Morrilton and Blackville, eliminating 4 grade crossings; will resurface with shale and cover with asphalt Highway No. 7, from Russellville to Dardanelle, and connecting with No. 22.

Fla., Starke—State Road Dept., Tallahassee, plans completing state prison farm road from Starke, Bradford County to farm, during 1930.

Georgia—State Highway Bd., East Point, will pave at once, State Route No. 50, from Waycross, Ware County to Brunswick, Glynn County; W. R. Neel, State Highway Engr.

Ga., Atlanta—City Council, L. N. Ragsdale, Mayor, considering widening Whitehall St., Forsyth St. to Stewart Ave.

Louisiana—Louisiana Highway Comsn., Baton Rouge, receives bids May 13 for 2 roads: Acadia and Lafayette Parishes—14 mi. conc., Crowley-Duson Highway, Route 2; St. Mary Parish—7 mi. conc., Morgan City-Bayou Bouef Highway, Route No. 2; H. B. Henderlite, State Highway Engr. 2-20, 3-13

Louisiana—Louisiana Highway Comsn., Baton Rouge, receives bids April 15 for 8 roads: Caldwell Parish—6 mi. grading, draining, Columbia to Chatham; Allen Parish—5.3 mi. grading, Kinder-De Quincy Highway; Beauregard Parish—7.7 mi. grading, Kinder-De Quincy Highway; Grant Parish—5 mi. grading, draining, Dry Prong-Verde Highway; West Carroll Parish—2.5 mi. surfacing Epps-Oak Ridge Highway; 2.5 mi. surfacing Kilbourne-Concord school highway; H. B. Henderlite, State Highway Engr.

La., Alexandria—See Airports, Airplane Plants, etc.

La., Bastrop—Morehouse Parish Police Jury plans expending \$165,000 for 12 mi. roads and 4 bridges over Bayou Bartholomew, in 7 wards. See Financial News Columns. 1-18

Maryland—State Roads Comsn., Baltimore, receives bids April 1 for 5 roads: Anne Arundel County—9.2 mi. conc. shoulders, Defense Highway, Camp Parole to Priest Bridge, Cont. No. AA-83-711; Cecil County—3.04 mi. conc., State Highway, from Kettch to Liberty Grove, Cont. Cen-75-22; Montgomery County—2.47 mi. conc., Laytonville-Olney road, end of Cont. M-67 to Cont. M-10, Cont. M-145-52; Prince George's County—4.2 mi. gravel, road, from end of Cont. P-69, near Croome to Naylor, Cont. P-101-85; Worcester County—.99 mi. conc. with slag shoulders, Pocomoke-Cedar Hall road, end of Cont. Wo-63, toward Cedar Hall, Cont. Wo-73-14; G. Clinton Uhl, Chmn. 12-19

Md., Baltimore—Wm. F. Broening, Mayor, approved ordinance providing for widening Liberty St. to straight line with Cathedral St., and eliminating triangle at corner of Liberty and Saratoga St.; other ordinances provide: Opening, widening and grading Cedonia Ave., Broening Highway, Boston St., Ellmont, Belview and Frankford Ave.; opening, grading and paving Forrest St., Front to Ensor, Ensor St., Madison to Monument, as part of Bath St. viaduct project; Nathan L. Smith, Highways Engr. 2-20

Md., Towson—Baltimore County Comms., John R. Haut, Ch. Clk., receive bids April 1 to improve 3 roads: 1.5 mi. conc., Old York road, from end of conc. to Harford County line, Seventh Dist.; 1 mi. conc., Old York road, from Stockton road, south, Tenth Dist.; .9 mi. conc., Mace Ave., Ridge road to Trump's Mill road, Fourteenth Dist.; Samuel A. Green, Roads Engr.

Miss., Holly Springs—See Bridges, Culverts, Viaducts.

Miss., Kosciusko—Attala County Bd. of Supvrs. plans expending \$250,000 for gravel roads. See Financial News Columns. 3-20

Miss., Merigold—City, J. S. Fincher, Clk., plans completing hard surfacing roads leading into Merigold, estimated cost \$150,000.

Miss., Raleigh—Smith County Bd. of Supvrs. receives bids March 28 for 3 mi. road: 31,600 cu. yd. excavation and borrow, 20,254 lb. rein. steel; J. L. Wheeler, Engr. in charge, Hattiesburg; H. D. McLemore, Asst. Engr., Raleigh.

Miss., Tunica—Town, W. G. Jaques, Clk., receives bids March 28 for 8,464 sq. yd. conc. paving, 1,795 lin. ft. curb and gutter, 4,650 sq. ft. 4-in. conc. sidewalk, manholes and inlets.

Mo., Cameron—Comms. of Cameron Special Road Dist., Clinton County, Chas. G. Jones, Clk., plan expending \$25,000 for road building. See Financial News Columns.

Mo., Carthage—State Highway Dept., Jefferson City, plans building this year, gravel farm-to-market road, Jasper County, from Stone's corner, on North Main St., to beyond Oronogo, and intersecting with U. S. Highway No. 66 west of Carthage; \$844,044 appropriated; T. H. Cutler, Ch. Engr.

Mo., Clayton—St. Louis County receives bids April 2 to improve Lockwood Ave., Swon to Berry road; Woodson road, Olive St. road to Page St.; Roy Jablonsky, Highway Engr.

Mo., Jackson—Cape Girardeau County Highway Comsn., Jackson, plans system of farm-to-market roads, consisting of following: Dutchtown to Whitewater; Delta west to Bollinger County; 5 mi. spur, from Highway No. 25 to Randles and to Scott County line; spur off of Highway No. 25 near Arbor to Scott County line; north from Whitewater, with spur near Crump to Bollinger County line; road from Daisy to Oak Ridge; from Highway No. 25, near John Adams farm, north to Pocahontas, New Wells, and Perry County line near Apple Creek; Neelys Landing, south to Egypt Mills and to Cape Girardeau.

Mo., St. Louis—City, Bd. of Public Service, E. R. Kinsey, Pres., receives bids April 1 for improving alleys in various sections.

North Carolina—State Highway Comsn., Raleigh, receives bids in April for 7 roads and 3 bridges; Dare County—10 mi. gravel, sand asphalt, or conc. road, to Manteo; Cumberland County—3.2 mi. hardsurface, Route 53, through Fort Bragg reservation; Franklin County—4 mi. grading, structures, top soil, Route 56, Franklinton to Granville County line; Granville County—9 mi. grading, structures, top soil Route 56, Creedmoor to Franklin County line; Guilford County—10 mi. widen 18 to 20 ft., and hard surface Route 10, from Guilford County Home to

Junction of Routes 10 and 100, near Whitsett; Montgomery County—3.2 mi. grading, paving, Route 74, Biscoe to Moore County line; Gaston County—8 mi. grading, structures, top soil, Route 275, Dallas to Bessemer City; Pasquotank and Camden Counties—bridge across Pasquotank River, Route 34, at Elizabeth City; Craven County—bridge and approaches over Neuse River, Route 12, Kinston; Rockingham County—bridge on Route 704 and 708, over Dan River.

N. C., Durham—State Highway Comsn., Raleigh, plans road improvement in Fourth Dist.: Oil treat Durham-Wake Forest Highway, from Neuse River bridge to Wake Forest; second coat of oil and gravel on remaining 12 mi.; pave 18-ft. wide Route 50, Merry Oaks to Bonsal; treat Route 54, from Carrboro to Alamance County line.

N. C., Greensboro—City Council, R. P. King, Jr., Mayor, considering extending grading and sand-claying, West Market St., to city limits, cost \$6000 to \$7000.

N. C., Shelby—State Highway Comsn., Raleigh, making preliminary survey for 7 mi. surfaced highway from Kings Mountain, Cleveland County, to connect at State Line, with 20 mi. road. South Carolina Highway Comsn. will build.

N. C., Winston-Salem—City, Capt. Harry L. Shaner, Commr. of Public Works, plans receiving bids soon, to repave Liberty St.: From Sixth to Eighth, and from Eighth to Patterson Ave., with Durax; from Patterson to Fourteenth, with sheet asphalt.

Okla., Oklahoma City—City, E. M. Fry, Mgr., plans paving for 2 districts, including Twenty-sixth St., Lincoln Blvd. to Walnut Ave.; Twenty-seventh St., Lincoln to Stiles Ave.; W. W. Small, City Engr.

Okla., Hollis—State Highway Comsn., Oklahoma City, may receive bids, 60 to 90 days, for grading, draining, etc., 19 mi. State Highway No. 7, through Harmon County; A. R. Losh, State Highway Engr. 3-20

S. C., Greenville—Greenville County considering expending \$200,000 to complete surface treatment on county highways. See Financial News Columns.

Tennessee—Dept. of Highways and Public Works, Nashville, receives bids April 18 for 5 roads and 12 bridges and approaches: Hamilton County—9 1/2 mi. grading, draining, Highway No. 38, Harrison to Meadowview school, including four 20-ft. bridges over small creeks; conc. and steel bridge over Wolftever Creek; Haywood County—3 mi. grading, draining, Highway No. 76, across Forked Deer bottom, 6 conc. bridges; Wayne County—9 mi. grading, draining, highway between Sol Hollow and Flatwood; conc. steel and timber bridge and approaches over Buffalo River at Bell's Ford on same road; Cheatham County—9 1/2 mi. grading, draining, Highway No. 49, Ashland City to Robertson County line; Putman County—paving 8 mi., Highway No. 42, Cookeville to Monterey; T. E. McEwen, State Highway Engr.

Tenn., Chattanooga—Hamilton County, Will Cummings, County Judge, will widen, probably to 24 ft., and pave loop of highway from Dayton Pike, through Soddy, connecting with new conc. highway.

Tenn., Chattanooga—City, E. D. Bass, Mayor, plans receiving bids soon to grade Market St. extension; W. H. Wilson, City Engr. 1-23

Tenn., Clinton—City, H. C. Scruggs, Reorder, plans starting in about 30 or 60 days on 20-ft. street paving and 5-ft. sidewalks; estimated cost \$20,000; Campbell Wallace, Engr.

Tenn., Lenoir City—City, John Johnson, Chmn. of Street Comsn., plans crushed rock paving on various streets.

Tex., Beaumont—City, Paul H. Millard, Mgr., received low bid from Gulf Bitulithic Co., 2820 Polk St., Houston, \$205,763, on asphalt, and \$209,197, rein. conc. paving on 15 streets, including Cable, Calder, Ewing; R. C. Black, City Engr.

Tex., Colorado—City, L. A. Costin, Mgr., plans 7 blocks additional paving on Cedar St.

Tex., Dallas—Dallas County Comms. Court, Charles E. Gross, County Auditor, receives bids April 14 for grading, draining, paving Kessler Outer Blvd. No. 3; Rollins & Clinger, Dist. Engrs.

Tex., Galveston—Galveston County, E. B. Holman, County Judge, may let contract within 60 or 90 days for 16,973 mi. grading, draining, rein. conc. surfacing, shell shoulders, Highway No. 58; J. C. Washington, Res. Engr. 3-13

Tex., Fort Stockton—Pecos County Commrs. considering expending \$500,000 for roads. See *Financial News Columns*.

Tex., Newton—Newton County considering expending \$250,000 for Highway No. 25, and lateral roads, through county. See *Financial News Columns*.

Tex., Ozona—Crockett County plans expending \$375,000 for road building. See *Financial News Columns*. 2-27

Tex., San Antonio—City, C. M. Chambers, Mayor, considering widening North Flores St., 60 to 80 ft., Rodriguez St. to Five Points; cost about \$276,000; contingent on result of proposed bond election; I. Ewig, City Engr.

Tex., Taft—City plans expending \$105,000 for street improvement. See *Financial News Columns*.

Tex., Tascosa—Oldham County Commrs., Vega, Bud Turner, Commr., Tascosa, plans starting soon on grading Tascosa Trail, from Potter County line to Canadian River, Oldham County; reported, Fort Worth & Denver City Ry. Co., R. C. Gowdy, Ch. Engr., Denver, Colo., making soundings for highway bridge across Canadian River at Tascosa.

Virginia—State Highway Coms., Richmond, received low bids for furnishing road building materials: From Mexican Petroleum Co., 3,804,800 gal. at \$234,828; Texas Co., 3,195,700 gal. at \$202,571; American Tar Products Co., 42,000 gal. at \$5,182; International Combustion Tar & Chemical Co., 125,000 gal. at \$15,254; Barrett Co., 50,000 gal. at \$5,950; Ugle Sales Corporation, 56,000 gal. at \$6,916; Standard Oil Co., 34,000 gal. at \$2,710; Central Commercial Co., 39,400 gal. at \$5,440; Applying: Southern Asphalt Co., Richmond, 618,000 gal., \$6,736; Sam Finley, Atlanta, 1,324,000 gal., \$12,910; Edward P. Pendleton, 236,000 gal., \$3,162; Lansell Co., Hackensack, N. J., 974,000 gal., \$12,954.

Va., Luray—Town plans building Main St. from Lee St. at Borst Place to railroad. See *Financial News Columns*. 2-6

Va., Richmond—City, R. Keith Compton, Dir. of Public Works, received low bid from C. M. Henley, Richmond, \$85,226, for 38,000 sq. yd. vitrified brick paving on Main, Marshall and Fifth St. 2-27

Va., Roanoke—State Highway Coms., Richmond, has tentative plans for 5.17 mi. Routes 206 and 205, from west corporate limits of Roanoke, westerly: C. S. Mullen, Ch. Engr.

W. Va., Charleston—Kanawha County Court receives bids April 15 to grade and drain 5 roads, and construct retaining wall: 2.5 mi. Bufflick run road; 4.5 mi. Thoroughfare road; 1 mi. Hughes Creek road; 78 mi. Kanawha Two Mile road; .66 mi. Wolf Pen branch road; retaining wall along Clendenin-Falling Rock road.

#### Contracts Awarded

Ala., Mobile—City Commrs., S. H. Hendrix, City Clk., let contract to Hancock Brothers, 310 St. Michael St., to resurface Government St., Ann St. to Weinacker Ave., with Alabama rock asphalt.

Arkansas—State Highway Coms., Little Rock, let contracts for 25 roads and several bridges, totaling \$1,624,584: Washington County—4½ mi. conc., Clear Creek-North road, State Highway No. 71, West Arkansas Construction Co., Fort Smith, \$64,908; Jefferson County—1 mi. conc., Pine Bluff-Grady road, State Highway No. 65, West Arkansas Construction Co., \$58,927; 6½ mi. conc., Pine Bluff-Grady road, Highway No. 65, Kovasovich & Price, Little Rock, \$93,273; Logan and Yell Counties—5 mi. conc., Fort Smith-Dardanelle road, Highway No. 22, Schultz Construction Co., Fort Smith, \$107,888; Benton County—8½ mi. conc., Springdale-Rogers road, Highway No. 71, West Arkansas Construction Co., \$119,684; Garland County—6 mi. gravel surface, Hot Springs-Glenwood road, Highway No. 70, A. C. Kennedy, Little Rock, \$7,545; Ashley County—2½ mi. grading, draining, Crosssett-Ouachita River road, Highway No. 2, Burnell & Mack, Paragould.

In Union County—grading, draining, Strong-Crossett road, Highway No. 2, Ayres & Graves, Hope, \$90,288; 4 mi. grading, Strong-Crossett road, Highway No. 2, Horton-Price Co., Texarkana, \$252,392; involving construction of 1,286,000 yd. earth embankment; Union and Calhoun Counties—5 mi. grading, draining, Calion-Hampton road, Highway No. 115, Horton-Price Co., \$150,799; Crittenden County—20 mi. gravel surface, State Highways 16 and 3, Cross-Crittenden County line-Lehi road, Highways 16 and 3, O. M. New, Conway, \$11,984; Woodruff County—18 mi. gravel surface, Augusta-Fair Oaks road, Highway No. 16, O. M. New, \$7,565;

Hempstead, Howard and Pike Counties—6 mi. gravel surface, Murfreesboro-Nashville road, Highway No. 27, M. O. Weaver, Iowa Falls, Iowa, \$8,495; Miller County—20½ mi. gravel surface, Texarkana-Garland City road, Highway No. 2, I. C. Chapman, El Dorado, \$6,272; Howard and Sevier Counties—1½ mi. gravel surface, Nashville-Lockesburg road, Highway No. 24, M. O. Weaver.

In Pulaski County—16 mi. gravel and crushed stone surface, Little Rock-Perryville road, Highway No. 10, A. C. Kennedy, \$36,213; Garland and Hot Spring Counties—12 mi. gravel surface, Hot Springs-Arkadelphia road, Highway No. 7, A. C. Kennedy, \$36,314; Hot Spring County—12 mi. gravel surfacing, Bismarck-north and south road, Highway No. 7, M. O. Weaver, \$10,620; Perry County—14½ mi. crushed stone surface, Perry-Owensville road, M. O. Weaver, \$42,234; Yell County—10 mi. gravel surface, Magazine-Danville road, Highway No. 10, J. M. Lile & Son, Mansfield, \$14,680; Carroll County—8 mi. gravel surface, Harrison-Eureka Springs road, Highway No. 12, Rogers & Pridmore, Lincoln, \$18,972; Baxter County—9 mi. gravel surface, Mountain Home-Henderson road, Highway No. 12, T. L. Thorgmartin & Son, Fort Scott, Kansas, \$18,764; Union County—1 mi. grading, draining, cone, paving, El Dorado-Junction City road, Highway No. 167, Grady Girms, Rector Bldg., Little Rock, \$27,044.

In Sebastian County—5½ mi. grading, draining, cone, paving, Greenwood-Mansfield road, Highway No. 71, Garrett Construction Co., 211½ Commercial St., Springfield, \$106,819; Sebastian and Scott Counties—5 mi. grading, draining, cone, paving, Greenwood-Mansfield road, Highway No. 71, Garrett Construction Co., \$94,830; Cross County—328 lin. ft. treated timber pile bent bridges, Wynne-North road, Highway No. 1, C. E. Snyder & Co., Ripley, Tenn., \$11,225; Lawrence, Greene and Craighead Counties—939 lin. ft. struct. steel and rein. conc. bridges, 261 lin. ft. earth embankment approaches thereto, Jonesboro-Hoxie road, Highways No. 91 and 68; W. R. Wilburn, Water Valley, Miss., \$77,261; Marion and Boone Counties—673 lin. ft. rein. conc. bridges, Lead Hill-Yellville-Bergmen road, Highways No. 14 and 43, Cole & Jones, Fayetteville, \$37,613. 3-6, 3-13, 3-20

Ark., DeQueen—Comms. of Paving Improvement Dist. No. 1, let contract to Otto Yenglin, Texarkana, Ark., at \$136,217, for about 30 blocks grading, draining, curb gutter and paving; J. W. Dawson, Engr., 425 State National Bank Bldg., Texarkana. 1-9

Fla., Pensacola—Escambia County Comms., let contract to George K. Armes, Talahasse, \$33,186, for 3.2 mi. asphalt surface Jackson and Corryfield Highway, from Barrancas Ave. to West Pensacola Highway, with spur to naval flying field.

Georgia—State Highway Bd., East Point, let contract to Hall & Bowen, \$105,147, for 4,763 mi. conc., Quitman-Thomasville road; to W. J. Tidwell, Jr., \$20,298 for bridge, both in Brooks County. 3-13

Ga., Brunswick—City, E. C. Garvin, Mgr., let contract to Langston Construction Co., \$53,000, for 2-in. asphaltic conc. on 6-in.imerock base paving, curbing, gutters, storm drainage, etc. on about 6 streets and avenues; E. V. Camp and Associates, Inc., Consult. Supvg. and Testing Engrs., Atlanta. 3-13

Ia., Columbia—Village let contract to Fleniken Construction Co., Cahn Bldg., Shreveport, for about 2 mi. asphalt street paving; cost \$7,500 to \$10,000.

Ia., Winsfield—City let contract to R. L. Young, Bastrop, for 3 blocks paving, Abel and Court St.

Miss., Biloxi—Harrison County Bd. of Supvrs., Eustis McManus, Clk., let contract to Southern Paving & Construction Co., at \$14,883 for improvements on West Howard Ave. 2-20

Miss., Kosciusko—City let contract to S. G. McCool for sidewalks on North and South Natchez, and on North Wells St.

Mo., Ava—State Highway Coms., Jefferson City, let contract to Garrett Construction Co., 211½ E. Commercial St., Springfield at \$96,470 for 4,854 mi., 24-ft. graded earth roadway, culverts and 300-ft. rein. conc. bridge east of Ava, six 50-ft. girder spans, 20-ft. roadway, earth approach; also triple 12x8x39 ft. rein. cohe. box, 25,230 lb. rein. steel; T. H. Cutler, Ch. Engr.; J. L. Norman, Project Engr., Ava.

Mo., Joplin—City Council let contract to V. E. Koch, 419 Joplin St., at \$1.57 per sq. yd. for conc. paving, and at 29 cents per ft. for curbing on Shifflerdecker Ave., Fourth to Seventh, to be widened 20 ft.

N. C., Wilmington—City, B. H. Dewey, Clk., let contract to Blythe Brothers & Co., Brevard Court, Charlotte, \$84,392, for paving, curbing, gutters, catch basins, etc., on 6 streets, including Market, Sixth, Ann; James E. L. Wade, Commr. of Public Works; J. L. Beeton, Engr. 3-6

Okl., El Reno—Connelly Brothers, has contract to pave 4 blocks Elm St., Hoff to Bickford Ave., with conc.

Okl., Newkirk—Kay County Comms. let contract to Tom Collins, Cushing, at about \$1.96½ per sq. yd., for about 3 mi. paving at Kay City Scenic Highway, 31,680 sq. yd.; at \$1.911½ per sq. yd. for about 2½ mi. Blackwell-Nardin Highway, 26,400 sq. yd.; to Joe Richardson, Ponca City, for 2,500 sq. ft. conc. walk at Kay County home for poor, west of Newkirk; to Oscar Myers, Arkansas City, for bridge approach work, southwest of Newkirk; Joe Clark, County Engr. 4-13

Okl., Oklahoma City—City, E. M. Fry, Mgr., let contract to Earl W. Baker Co., Perrine Bldg., for widening Twenty-ninth St., south, from Santa Fe to High Ave.; at \$2.00 per yd. for conc. slab.

Tenn., Bolivar—City, Mayor and Bd. of Aldermen, let contract to Focum James Co., Dyersburg, \$31,028, for paving around city square and Market St.; work to begin at once.

Tenn., Jackson—City, R. L. Balch, Clk., let contract to Interstate Construction Co., to pave with asphalt several streets in business section; rebuild with asphalt surface 5 streets, including Belmont, Farrar St.; repair with asphalt 12 streets, including Eden, Elizabeth, Fairground; E. R. Dike, Engr.

Tenn., Memphis—Hogan Construction Co., foot of Auction St., has contract, \$72,000, for 5,400 ft. paving, Poplar St. 12-12

Texas—State Highway Coms., Austin, let contracts for 11 roads and 2 bridges: Bowie County—13.27 mi. grading, structures, Highway No. 11, DeKalb south, C. W. Burgess, New Boston, \$58,243; for heavy structures, \$21,502; 3.4 mi. grading, structures, conc. paving, Highway No. 5, from New Boston west, J. P. Foty, Dallas, \$91,128; 5.1 mi. double bit. surfacing, Highway No. 1, east of Redwater to east of Maud, P. F. Connally Paving Co., Home Insurance Bldg., Little Rock, \$9,774; Navarro County—9 mi. grading, draining, State Highway No. 31, Corsicana to point east of Powell, D. H. Purvis & Son, Texas Natl. Bank Bldg., Fort Worth, \$96,899; Throckmorton County—15 mi. conc., State Highway No. 23, Throckmorton to Shackelford County line, McClung Construction Co., Fort Worth Natl. Bk. Bldg., Fort Worth, \$367,311; Grayson County—12 mi. grading, draining, Highway No. 5, Sherman to Fannin County line, J. P. Foty, \$116,538; Purvis & Burtram, Fort Worth, large structures; 4 mi. grading, draining, Highway No. 6, Denison to Red River Bridge, McCall Engineering Co., 307 Amicable Bldg., Waco, \$90,389; John F. Buckner, Cleburne, \$71,983, large structures.

In Leon County—14 mi. grading, draining, Highway No. 43, Oakwood to Buffalo, E. G. Powell, Jacksonville, \$114,771; Runnels County—10 mi. grading, draining, Highway No. 4, Ballinger to Concho County line; steel and rein. conc. bridge across Colorado River, Highway No. 4, S. Thompson Co., San Angelo, \$109,671; Pecos County—11 mi. grading, draining, Highway No. 3, Brewster County line to Terrell County line, L. J. Miles, 1800 Clover Lane, Fort Worth, \$45,945; Austin Bridge Co., 1815 Coombs St., Dallas, \$31,940, large structures; Upton County—2.5 mi. grading, draining, Highway No. 99, from Crane County line to Rankin, Armstrong & Hudman, Pecos, \$64,533; W. W. Vann, Mercedes, \$56,880, large structures; Mason County—rein. conc. and steel bridge and embankment approaches across Llano River, Highway No. 9, Monarch Engineering Co., 1146 W. Laurel St., San Antonio, \$117,749; Gibb Gilchrist, State Highway Engr. 3-13

Texas—State Highway Coms., Austin, let contracts for 23 roads and several large drainage structures: Brown County—14,707 mi. grading, draining, Highway No. 129, Carey Bros. & Co., Anson \$60,065; to G. F. Davis, Abilene, \$32,027, large drainage structures; Val Verde County—4.48 mi. limestone rock asphalt surface treatment, Highway No. 30, Houston Surfacing Co., 3840 Polk St., Houson, \$9289; Red River County—6.5 mi. double bit. surface treatment, Highway No. 5, P. F. Connelly Paving Co., 625 Home Insurance Bldg., Little Rock, \$13,171; 9.7 mi. double bit. surface treatment, Highway No. 5, M. P. Turner, Marshall, \$20,481; Titus County—8.8 mi. double bit. surface treatment, Highway No. 1, P. F. Connelly Paving Co., \$17,605; Potter County—11.31 mi. single bit. surface treatment, Highway No. 33, Mancay &

Alley, Empire Bldg., Oklahoma City, Okla., \$16,941.

In Sutton County—22.3 mi. double bit. surface treatment, Highway No. 30, Dexter Construction Co., Hangar No. 10 Love Field, Dallas, \$40,791; Gonzales County—7.2 mi. single bit. surface treatment, Highway No. 29, McKinney & Pardee, Nacogdoches, \$9364; Wood County—6 mi. double bit. surface treatment, Highway No. 15, McClung Construction Co., 1309 Fort Worth Bank Bldg., Fort Worth, \$9364; Jasper County—11 mi. double bit. surface treatment, Highway No. 8, H. K. McCollum, 1507 Fort Worth Bank Bldg., Fort Worth, \$25,426; Polk County—42.31 mi. double bit. surface treatment, Highway No. 35, M. P. Turner, \$73,637; Edwards County—9.22 mi. single bit. surface treatment, Highway No. 55, Dexter Construction Co., \$12,337; Collin County—4.15 mi. double bit. surface treatment, Highway No. 39, Dexter Construction Co., \$8355.

In Williamson County—14.5 mi. single bit. surface treatment, Highway No. 74, Dexter Construction Co., \$21,035; Rusk County—4.41 mi. double bit. surface treatment, Highway No. 26, M. P. Turner, \$11,234; Harrison County—11.74 mi. double bit. surface treatment, Highway No. 8, Flenniken Construction Co., American Bk. Bldg., Shreveport, La., \$26,556; Eastland County—9.09 mi. double bit. surface treatment, Highway No. 67, McClung Construction Co., \$17,762; Llano County—1,496 mi. grading, draining, Highway No. 124, C. W. Gilfillan, 33 Enfield Rd., Austin, Tex., \$23,456; Waller County—6.834 mi. grading, draining, Highway No. 20, Martin Bros., 318 Goodhue Bldg., Beaumont, \$152,299; to Austin Bridge Co., Box 1094, Dallas, \$47,447, large draining structures; Van Zandt County—10,984 mi. grading, draining, Highway No. 15, C. A. and J. W. Vilbig, Paris, St. Dallas, \$62,141; Morrison & Coleman, Stealey Bldg., Wichita Falls, \$48,873, large drainage-structures.

In Crane County—32.355 mi. grading, draining, triple bit. surface treatment, caliche base course, Highway No. 136, L. W. Pelphey Co., Box D. D., Breckenridge, \$424,594; at \$40,356 for large drainage structures; Gillespie County—12,720 mi. grading, draining, Highway No. 20-A, Brown & Root, Inc., Box 745, Austin, \$84,742; Cage Bros., Bishop, \$79,817, for large drainage structure; Caldwell County—12,227 mi. grading, draining, standard gravel surfacing, Highway No. 80, Standifer Bros., Box 193, Big Wells, \$60,553; Dozier Construction Co., Littlefield Bldg., Austin, \$41,718, large drainage structures; Gibb Gilchrist, State Highway Engr. 3-13

Tex., Coleman—J. McCarthy, has contract at \$26,000, for 5-in. conc. paving, Cottonwood St.

Va., Richmond—City, R. K. Compton, Dir. of Public Works, let contract to Murray Construction Co., Knoxville, Tenn., \$163,701, for 35,550 sq. yd. 1½-1½ sheet asphalt on 8-6-8 conc. base, 9,000 sq. yd. 1½-1½ sheet asphalt exclusive of base, 8,350 sq. yd. sheet asphalt on 6-in. conc. base, in car track area, 9,550 sq. yd. one course conc.; E. P. Asbury, Engr., Richmond.

Va., Woodstock—M. T. McArthur, Johnson City, Tenn., has contract at \$84,310, for 8.9 mi. grading, draining, Route 55, Strasburg to Riverton, link in proposed John Marshall Memorial Highway.

West Virginia—State Road Comsn., Charleston, let contracts for 9 roads and 3 bridges: Pendleton County—8 mi. grading, draining, State Route No. 5, from mouth of Seneca River to Randolph County line, Albert Brothers, Salem, Va., \$328,810; Braxton County—8 mi. Route No. 13, Keely Construction Co., Empire Bldg., Clarksburg, \$109,830; Lincoln County—7 mi. grading, draining, Yawkey-Woodville road, Hatfield & Turman, Charleston, \$242,160; Monongalia County—3.89 mi. grading, draining, Blacksville-Bula road, Roso & Ritchie, Ravenswood, \$93,995; Ritchie County—7.7 mi. grading, draining, MacFarland-Cisco road, Boso & Ritchie, Ravenswood, \$251,514; Fayette County—5.2 mi. Beckwith-Fayetteville road, Curtis & Rector, Spencer, \$30,700; Harrison County—1 mi. Perry Mine undergrade, Paul S. Horner Co., Goff Bldg., Clarksburg, \$64,079; Pocahontas County—4.7 mi. Frost-Virginia State Line, Pocahontas Construction Co., Marlinton, \$78,514; Tucker County—8.8 mi. Davis-Harman road, R. Giavina & Co., Weston, \$89,503; Greenbrier County—Big Clear Creek, Clark and Lewis, Luray, Va., \$7218, for substructure; Wheeling Structural Steel Co., Wheeling, \$6030 for superstructure; Little Clear Creek, Clark and Lewis, \$5000 for substructure; Roanoke Iron & Bridge Co., Roanoke, Va., \$5100 for superstructure; Monongalia County—Blackville Bridge, Bramham and Edwards Construction Co., Union Bank Bldg., Clarksburg, \$21,050 for substructure; Vincennes Bridge Co., Vincennes, Ind., \$27,231 for superstructure; Roane County—Corder Bridge, J. R. Janelro,

Grantsville, \$14,992, for substructure; Vincennes Bridge Co., \$10,320 for superstructure.

2-20

### Sewer Construction

**Sewer construction in LAND DEVELOPMENT** projects involves the expenditure of large sums of money. Under that classification details of these improvements are reported.

Ala., Hunstville—City, A. W. McAllister, Mayor, reported, plans 2½ mile drainage ditch.

Ark., Wynne—Volz Construction Co., Memphis, Tenn., reported, has contract at \$47,133 for sewers, Sewer Imprv. Dist No. 1.

D. C., Washington—Warren F. Brenizer Co., 401 New York Ave., N. E., reported, has contract for 2 sewers in Tilden St., N. W.

Ga., Macon—City defeated sewer and park bonds. See Financial News Columns. 2-20

Ky., Ashland—Ashland Construction Co., reported, has contract at \$35,744 for sewers in S. Ashland.

La., New Orleans—Fairbanks, Morse & Co., 1000 St. Charles St., reported, low bidder on Item 1 and 2, Contr. 203-S, furnishing and installing 2 frequency changer sets, 2 motor generator sets, 2 transformers, switch panel instruments and accessories. 1-23

La., New Orleans—Sewerage and Water Bd., receives bids at office of A. G. Moffat, Sec., 526 Carondelet St., until May 21 for following: Cont. 107-D, two 110-in. screw pumps for drainage station No. 9; Contr. 114 D, extension to drainage pumping station No. 3; Cont. 115-D, truck type switchboards, motor generator, transformers and accessories for drainage station No. 2; and for furnishing insulated wire and cable for sewerage station No. 17.

La., Shreveport—City, H. E. Barnes, City Engr., receives bids April 1 for furnishing drain pipe for use at municipal airport; bids invited on vit. clay, conc. and types of perforated iron, ranging from 4-in. to 24-in.

Md., Baltimore—Bd. of Awards receives bids April 2 for building superstructure of Colgate drainage pumping station at Breoning Highway and Pennsylvania R. R. See Want Section—Bids Asked.

Md., Baltimore—Bd. of Awards will repair with city forces high level intercepting sewer in northwestern section; cost about \$10,000.

Md., Baltimore—Bd. of Awards receives bids April 2 for settling tanks Nos. 1 and 2, at Back River Sewage Treatment Works. See Want Section—Bids Asked.

Miss., Laurel—City receives bids March 31 for extension to sanitary sewer system. See Want Section—Bids Asked.

N. C., Wilmington—Dysard Construction Co., Island Home Park, Knoxville, Tenn., has contract at \$22,933 for construction of Ardmore outfall sewer and at \$32,770 for Dawson St. outfall; Virginia Engineering Co., 322 28th St., Newport News, Va., at \$35,355 for Green Mill Creek outfall.

11-28

Ola., Oklahoma City—Tibey Construction Co., Braniff Bldg., reported, has contract for lateral sanitary sewers.

Ola., Sayre—City votes March 31 on \$32,000 bonds for sewer extension. 2-27

Tex., Austin—W. G. Cullum, Central Bank Bldg., and Dellone Construction Co., Magnolia Bldg., both Dallas, reported, have contract for sewers; Kirkwood Wharton & Lee, San Antonio, contract for 2 sewer projects; and Daltex Construction Co., Allen Bldg., Dallas, for 4 sewer projects; total cost \$144,514.

Tex., Goose Creek—J. T. Robert, C. E., reported, working on plans for \$12,000 reduction plant.

Tex., Houston—Elder Construction Co., 4714 Jack St., has contract at \$42,488 for storm and sanitary sewers on Harrisburg Blvd., etc.

3-13

Tex., Houston—Griswold Bros., 3840 Polk St., reported, low bidder for sanitary sewers on Peden St., Dunlavy to Park St., etc.; H. L. Shaw, City Engr.

### Street Railways

Md., Baltimore—United Railways & Electric Co., Court Square Bldg., ordered 150 street cars, involving \$2,550,000, 50 from Cincinnati Car Corp., Winton Pl., Cincinnati, Engr.

Ohio, 100 from J. G. Brill Co., 62nd St. and Woodlawn Ave., Philadelphia, Pa.; will rebuild number of present cars in own shops.

1-23

### Telephone Systems

Miss., Gulfport—Southern Bell Telephone and Telegraph Co., Atlanta, Ga., plans modern exchange.

Mo., Joplin—Southwestern Bell Telephone Co., I. R. Timlin, Archt., Telephone Bldg., St. Louis, George A. Smith, Dist. Mgr., completing plans for exchange, Pearl Ave.; 2 story and basement with provision for expansion to house long distance equipment.

10-17

Mo., Mountain Grove—Western Telephone Corp. erect \$45,000 exchange within next few months.

Tenn., Memphis—Memphis Broadcasting Co., incorporated; John W. McCall, Malory Chamberlin.

Tex., Del Rio—Del Rio and Winter Garden Telephone, L. Rust, Gen. Mgr., being formed by merger of Del Rio and Western, Laredo Southwestern and Transpecos companies; 7000 mi. of telephone lines; other incorporations include W. F. Boggess and J. V. Rucker.

Tex., San Antonio—Southwestern Bell Telephone Co., B. D. Hull, Engr., Dallas, opens bids Mar. 28 for \$2,500,000 administration and equipment building, Martin St. and Municipal Auditorium grounds. Following estimating on general contract: McKenzie Construction Co., Smith Young Tower; L. T. Wright & Co., Bldrs. Exch. Bldg., Summer-Sollett Co., Natl. Bank of Commerce Bldg., all San Antonio; Henger & Chambers, Dallas Natl. Bank Bldg.; Gilsonite Construction Co., Athletic Bldg., both Dallas; American Construction Co., Gulf Bldg., Houston; I. R. Timlin, Archt., Telephone Bldg., St. Louis, Mo.

3-20

Va., Martinsville—Appalachian Electric Power Co., Bluefield, W. Va., reported, negotiating to purchase city telephone system.

### Textile Mills

Ga., Macon—William Carter Co., 423 Plum St., manufacturers of knit underwear, Needham Heights, Mass., and Macon, reported, plans erecting additional building to house department now operating in leased building on Plum St.

Miss., Starkville—J. W. Sanders Cotton Mills, Inc., Medical Bldg., Jackson, reported, has plans in progress by Robert & Co., Inc., Engrs., Bona Allen Bldg., Atlanta, Ga., for \$100,000 mill building; 1 story and basement; steel frame; conc. footings; brick walls; built-up roofing; steel sash and doors.

N. C., Hickory—Lyerly Full Fashioned Hosiery Mill, Inc., reported, install 9 full fashioned machines. 2-20

N. C., Mebane—Harry Potts, Jr. and Frank Strauss, leased building formerly operated by Howard Silk Throwing Co.; will operate as F. & M. Dye Works.

N. C., Spindale—Sterling Hosiery Mills, Forest City, completed moving machinery from plant at Forest City to Spindale; consolidated with Forest City Hosiery Mills; plans erecting dye house for finishing and dyeing departments.

1-16

N. C., Thomasville—Amazon Cotton Mills, reported, install additional roving machinery purchased from Woonsocket Machine & Press Co., Inc., Woonsocket, R. I.

Tenn., Nashville—Hartford Hosiery Mills, reported, plans replacing burned portion of mill at penitentiary.

3-13

Tenn., Old Hickory—See Miscellaneous Enterprises.

Tex., San Angelo—Texas Wool and Mohair Co., reported, approved plans for addition to storage plant.

Va., Bristol—Grey Hosiery Mills, Inc., incorporated; James P. Grey.

Va., Suffolk—Bell Hosiery Corp., capital \$200,000, incorporated; J. R. Saunders, 103 W. Washington St.

### Water Works

Details of water works improvements in connection with the many LAND DEVELOPMENT operations will be found under that classification.

Ala., Selma—Selma Water Works Co., reported, soon call for bids for 1,000,000 gal. reservoir; cost \$25,000; J. C. Wiedeman, Engr.

Ark., Manila—City, reported, construct water works system and distribution works.

Ark., Star City—Water Works Improvement Dist., No. 31, reported, plans water works and distribution system; R. P. Parker, Engr., Box 126.

Fla., Belle Glade—City voted \$30,000 water works bonds. 1-16

Fla., Miami Beach—See Land Development.

Mo., Belmont—City, reported, plans water works; W. B. Rollins & Co., 339 Railway Exchange Bldg., Kansas City, Engr.

Mo., Cape Girardeau—City, N. A. Barks, Mayor, advises no bond issue contemplated for water works and electric light plant, as recently noted.

Mo., St. Louis—St. Louis County Court Comms. granted permit to St. Louis County Water Co. to lay 36-in. water main along south side of Olive St. Rd. from Link Rd. to Hog Hollow Rd.; cost about \$600,000.

N. C., Charlotte—City, R. W. Rigsby, City Mgr., probably issue \$250,000 bonds for additional water line between reservoir and filter plant. 3-20

Okl., Skiatook—Oklahoma Power & Water Co., Sand Springs, advises no definite decision reached in regards to construction of filtration plant. 3-6

Tenn., Bruceton—Town opens bids April 10 for \$45,000 water works, build 100,000-gal. reservoir on 100-ft. tower; install 8, 6, 4 and 2-in. Class B pipe; V. V. Long & Co., Engrs., Bennie-Dillion Bldg., Nashville. 3-20

Tenn., Kingsport—City, reported, extend water service to Lynn Garden.

Tex., Beaumont—McWane Cast Iron Pipe Co., Birmingham, Ala., reported, has contract for 8700 ft. of 8-in. pipe, United States Pipe & Foundry Co., East Burlington, N. J., for 6400 ft. of 12-in. pipe, total cost \$19,000. 4-13

Tex., Beaumont—Morey & Morey, 417 Praetorian Bldg., Dallas, has contract at \$17,150 for rehabilitation of 8 wood stave filter tubs and fittings. 3-20

Tex., Brownsville—City, reported, having plans prepared by Morey & Morey, Engrs., Praetorian Bldg., Dallas, for \$110,000 filtration plant. 1-23

Tex., Fort Worth—L. S. Valley, Second National Bank Bldg., Houston, low bidder at \$54,000 for equipment Holly Station; A. M. Lockett & Co., Magnolia Bldg., Dallas, awarded contract for Berry St. Station using two Worthington Pump & Machinery Corp., Park Ave., N. Y., pumps. 3-13

Tex., Pasadena—City, J. C. Thomas, Sec., receives bids April 10 for water works, sanitary sewers and disposal plant. See Want Section—Bids Asked.

### Woodworking Plants

Ark., Jonesboro—M. Ratinoff Furniture Mfg. Co., care Chamber of Commerce and Industrial Committee, R. E. Robertson, L. N. Allen and J. E. Parr, members, erect furniture plant.

Miss., Vicksburg—C. M. Gooch Hardwood Co., P. O. Box 272, rebuild dry kiln, Kings; brick, 3 section, 30,000 ft. daily capacity. See Want Section—Machinery and Supplies.

Tenn., Butler—Butler Furniture Mfg. Co., capital \$50,000, incorporated; I. W. Nave, J. C. Rambo.

### FIRE DAMAGE

Ala., Birmingham—Laundry and shops building at Convict Camp No. 2 near Kentona; loss \$50,000.

Ark., Fayetteville—Carpenter shops of University of Arkansas; loss \$13,000.

Ga., Sparta—Peden & Gaissert Lumber Co.'s planing mill; loss \$10,000.

La., Franklinton—Franklinton Wholesale Co.'s building; loss \$20,000.

Md., Baltimore—Frank Rosenberg's residence, 3613 Fairview Ave.

Md., Chestertown—Willard Dodson's residence, 3 mi. from Chestertown near village of Worton; loss \$10,000.

Md., Havre de Grace—Walter McHinney's store on Washington St.; John Clark's store; E. Newmeyer's store; Joseph Hamburger's store; loss \$100,000.

Md., Hebron—Three outbuildings on farm of Isaac T. Wimbrow near Hebron.

Mo., Hume—Telephone exchange of Citizens Public Service Co., Jefferson City.

Mo., Montgomery City—Wyatt's Garage and 12 motor vehicles; loss \$12,000.

Mo., North Kansas City—Potman Bldg., 17th St. and Swift Ave.; loss \$50,000.

Mo., St. Louis—Yardmaster's office building of St. Louis-San Francisco Ry., F. G. Jonah, Ch. Engr.; loss \$10,000.

Mo., Weaubleau—M. J. Morton's two buildings; loss \$25,000.

N. C., Albemarle—Arthur Furr's residence, Charlotte Highway near Albemarle.

N. C., Buxton—School building; loss \$15,000; address School Bd.

N. C., Danbury—Hotel at Piedmont Springs, near Danbury, owned by J. Spot Taylor Estate; loss \$60,000.

N. C., Chimney Rock—Oscar Shytle's Cafe; George W. Logan Inn; Miller Hardware Co.'s building; W. J. McIntire's garage; Tar Heel Inn owned by M. L. Edwards, Rutherfordton; Carolina Home owned by Citizens' Building and Loan Assn., Rutherfordton; loss \$75,000.

N. C., Tryon—Hillcrest Institute; loss \$15,000; Rev. R. D. Byrd, Headmaster.

Okl., Colbert—School building; loss \$35,000; address School Bd.

Okl., Pleasant Valley—Pleasant Valley Dist. School; address School Board.

Okl., Sapulpa—Bartlett-Collins Glass Co.'s warehouse; loss \$10,000.

S. C., Chester—Pryor Hospital; loss \$10,000.

S. C., Greenville—Five 6-room mill houses at Woodside Cotton Mills, Woodside, E. W. Woodside, Gen. Mgr.; loss \$10,000.

Tenn., Knoxville—Western Union Telegraph Co.'s office; Shriver Brothers' haberdashery; Arcade, Mynatt, Briscoe Bldgs. and other structures in business block on Union Ave. and Market St.; loss \$300,000.

Tex., Kerrville—Nathan Herzog's residence, damaged; loss \$14,000.

Tex., San Antonio—McAllister Bldg. on Navarro St.; loss \$30,000.

Va., Brucetown—Brucetown Woolen Mills, Inc.; loss \$50,000.

Va., Newport News—H. B. Walker & Sons, 208 23rd St., building, 218 Twenty-third St.; loss \$17,000.

Va., North Tazewell—North Tazewell Garage, Webster Harman, owner; Harman Bros. warehouse; residence of Norfolk & Western Ry. Co., Roanoke, Va.; 2 stores owned by H. G. Peery & Sons, dealers in hardware and furniture, loss \$100,000; dwelling of Harman Bros.; Harman General Merchandise Store; Tazewell Supply Co.'s warehouse; Stras Harman Wholesale Co.'s building, slight damage; total loss about \$150,000.

Va., Roanoke—Apartment building, 618 N. Day Ave., S. W., damaged, owned by Dr. Marcellus A. Johnson, Lewis-Gale Hospital; loss \$10,000.

Va., South Hill—Planing mill owned by Roanoke Lumber Co., leased and operated by Richmond Cedar Works, Fulton St., Richmond; loss \$75,000.

## BUILDING NEWS

### BUILDINGS PROPOSED

#### Association and Fraternal

La., Monroe—Knights of Columbus, Fred Naff, Chmn., Bldg. Comm., start work within 3 months on \$25,000 residence, Hart and Wood Sts.; brick, 2 stories, 60x20 ft.; gymnasium; financing by sale of bonds to members.

La., New Orleans—Young Men's Christian Assn., receives bids until April 22 at office Favrot & Livaudas, Ltd., Archts., Hibernia Bk. Bldg., for bldg., St. Charles Ave. and Lee Circle; \$300,000, rein. conc., steel, brick and stucco, fireproof, 3 and 4 stories; bldg. includes dormitory for about 100; sep. bldg. to house gymnasium, swimming pool, handball courts, locker rooms, etc. 3-6

Miss., Goodman—Ancient Free and Accepted Masons let contract to S. G. McCool, Kosciusko, for \$12,500 Masonic Hall.

N. C., Old Fort—State Y. M. C. A., J. Wilson Smith, Sec., Charlotte, plans \$18,000 improvements at camp between Old Fort and Bat Cave in Blue Ridge Mountains; plans call for new kitchen, lobby with stone fireplace, 2 tennis courts, 2 sleeping lodges, grading roadway between camp and highway, etc.

N. C., Shelby—Warren Hoyle, Post American Legion, Tom Abernethy, Commdr., considers erecting clubhouse.

Okl., Granite—American Legion plans clubhouse.

Va., Hopewell—DuPont Lodge, A. F. & A. M., receives bids April 4 (extended date) for temple, Broadway and Eighth Ave.; rein. conc. and brick, 2 stories, 61.6x95 ft., mastic, Tile-tex, wood and monolithic floors, 20-yr. Gold Bond roof, conc. foundation, \$35,000; address equipment proposals to W. T. Gillian, Sec.; Osbert L. Edwards, Archt.

#### Bank and Office

Ga., Atlanta—City let contract to J. V. Fain to raze old city hall; City Hall Development Co., Carling Dinkler, Pres., will erect \$2,500,000 office, store and garage bldg. on site; 20 or 30 stories; 3 entrances exclusive of garage entrance; G. Lloyd Preacher

& Co., Inc., Archts., Wynne-Claughton Bldg. 1-2

Mo., St. Louis—Midwest Life Insurance Co., A. C. Macline, Pres., 2803 Pine St., erect \$150,000 office and community bldg., Pine and Leffingwell Sts.; brick and conc., 6 stories; sketches by F. J. Roberson, Archt., 3412 Humphrey St.

Okl., Chickasha—Oklahoma National Bank, T. F. Chandler, Pres., reported, erect \$200,000, 7-story and basement, 50x90-ft., brick, stone, rein. conc., fireproof, bank and office building; tile and marble floors, steam heat, 2 elevators; St. Louis Building & Equipment Co., Archt.-Contr., 900 Sidney St., St. Louis, Mo., ready for sub-bids about April 1.

Okl., Oklahoma City—Indian Territory Illuminating Oil Co., A. V. Hoenig, V.P., Commerce Exchange Bldg., soon begin work on 2-story and basement, 60x112-ft., brick office building, E. 44th St., south of Oklahoma Ave.

Tex., Corpus Christi—Kokernot-Nixon Properties, S. Maston Nixon, member, have low bid at \$88,179 from L. T. Wright & Co., Bldrs. Exch. Bldg., San Antonio, for 4-story addition to Nixon Bldg. annex; Hardy & Curran, Archts., Nixon Bldg.; W. E. Simpson Co., Engrs., Miami Bldg., San Antonio. 2-27

Tex., Galveston—Gulf, Colorado & Santa Fe Railway Co., F. G. Pettibone, Vice Pres. Gen. Mgr., advises plans for general office bldg., being prepared by Engineering Dept., F. Merritt, Ch. Engr.; structure probably 8 stories with 11-story tower section to connect with present 10-story building. 3-20

Tex., New Braunfels—First National Bank, Walter Faust, Pres., have completed plans about April 15 for \$80,000 bldg.; brick or stone, rein. conc., 1 story, 50x50 ft.; Giesecke & Harris, Archts., Norwood Bldg., Austin; Jeremiah Schmidt, Asso. Archt., New Braunfels; Munsey Wilson, Struct. Engr.; L. D. Royer, Mech. Engr., both care Archts. 1-30

Tex., Seguin—Seguin Bank & Trust Co., H. H. Weinert, Pres., opens bids April 2 to re-model bldg.; fireproof; Paul G. Silber & Co., Archts., Bedell Bldg., San Antonio; bids by invitation. 2-27

## Churches

Ark., Atkins—Presbyterian Church, E. E. Cheek, Chmn., Bldg. Comm., erect 1-story, brick and stone building.

Ala., Mobile—Northside Baptist Church, H. G. Talbot, Chmn., Bldg. Comm., plans \$10,000 building on present site on State St.

Fla., Arcadia—Christian Church plans building.

Md., Great Mills—Pilgrims of St. Mary's, Miss Sarah S. Manly, Pres., Greenway Apts., Baltimore, plans memorial chapel; 15th century English architecture, stone, seat 200.

Md., Hagerstown—St. Pauls M. E. Church, Hubert Mullen, Sec., Summit Ave., erect \$50,000 Sunday school addition; native stone, 3 stories; Chas. E. Kountz, Archt., Young Bldg., will revise plans; no constr. for about 1 year.

N. C., Greenville—Protestant Episcopal Church selected Leslie N. Boney, Murchison Bk. Bldg., Wilmington, as architect for bldg.; preliminary plans.

Okla., Guthrie—First Baptist Church, Walter Whitney, Chmn., Bldg. Comm., erect \$50,000 auditorium after plans Kramer & Kerr, Archts., Burt Bldg., Dallas, Tex.; brick and cast stone, 3 stories, 69x70 ft., conc. foundation, flat comp. roof, cement and oak floors; plans completed; Sunday school later; Dr. Harvey Beauchamp, Consult. Archt., Burt Bldg., Dallas.

Okla., Oklahoma City—Memorial Park Assn., erect \$50,000 chapel; stone and brick; L. E. Blue, Archt., Mayo Bldg., Tulsa; plans about April 1.

Okla., Oklahoma City—Central Avenue Baptist Church, Rev. E. P. Roe, Pastor, soon start work on \$30,000 tabernacle, 601 W. Washington Ave.

Tenn., Knoxville—Arlington Baptist Church, Rev. C. L. Nicely, Pastor, plans erecting church in summer, Fairmount Blvd. near Powers Ave.; \$30,000, brick veneer; auditorium to seat 350 people.

Tex., Houston—Baptist Temple, Clayton Lee, Chmn., Bldg. Comm., has preliminary plans by R. D. Steele, Archt., First Natl. Bank Bldg., for \$100,000 bldg., Rutland and 20th Sts.; fireproof, brick and rein. conc., stone trim; also remodel present bldg. for Sunday school and erect annex.

Tex., Yorktown—Lutheran Church, F. C. Adix, Pres., Church Council, selected Eickenroth & Cocke, Maverick Bldg., San Antonio, as architects for \$50,000 bldg.; brick and rein. conc., seat 700.

W. Va., Charleston—Bream Memorial Church having plans prepared by Warne, Tucker Silling & Hutchinson, Archts., Masonic Temple, for \$250,000 Colonial building, Tennessee Ave. and Randolph St.; bids during Spring.

## City and County

Ark., Arkadelphia—Clark County, Geo. H. Wells, Judge, erect \$35,000, 1 or 2-story, brick and conc. 9-5.

Ala., Birmingham—Jefferson County Bd. of Revenue having plans prepared by George P. Turner, Martin Bldg., for \$150,000 almshouse at Ketona; also rebuild laundry and shops at Convict Camp No. 2 at Ketona, noted burned at \$50,000 loss.

Ark., Eudora—City plans 1-story and basement, 30x60-ft., brick and conc. city hall; annex 20x30 ft.; comp. built-up roof, wood floors, conc. floors in annex and basement.

Fla., Kendall—Dade County Bd. of Commrs., Hugh Peters, Chmn., Miami, have revised plans for convict stockade ready in few days; constr. probably by day labor; Belsham, Jorgensen & Schreffler, Engrs., Calumet Bldg., Miami.

Fla., Pensacola—City, J. H. Bayliss, Mayor, receives bids April 7 for remodeling clubhouse and installing 152 lockers for men and 20 for women at Osceola Municipal Golf Course; \$10,000, brick, stucco or frame; Walker Willis, Archt., Blount Bldg.

Okla., Sayre—City votes March 31 on \$50,000 city auditorium bonds and \$28,500 for library.

Tex., Bastrop—City Council plans city hall; will receive plans and specifications and cost estimates.

Tex., Pasadena—City, G. W. Conrad, Mayor, receives bids April 10 for city hall and

fire station; plans from J. C. Thomas, City Engr., Second Natl. Bk. Bldg., Houston.

1-23

Va., Pulaski—Pulaski County Bd. of Supervisors appointed E. P. Whitman to secure tentative plans and estimates for jail; approx. cost \$35,000.

## Dwellings

Ala., Birmingham—G. F. Elliott, care Miller & Martin, Archts., Title Guar. Bldg., erect brick veneer residence, Mt. Brooke Estates; 2 stories, comp. roof, steam heat; bids \$45,000.

D. C., Chevy Chase—Samuel H. Baker & Co., Inc., Box 829, Richmond, Va., erect 10 brick dwellings; total \$175,000. See Want Section—Building Material and Equipment.

D. C., Washington—C. H. Small & Co., 925 15th St., N. W., have permit for six 2-story, brick dwellings, 4400-14 Fourteenth St., N. W.; \$45,000.

D. C., Washington—Annie Thompson, 614 N St., N. W., erect \$10,000, 2-story, brick and frame dwelling, 1435 Hemlock St.

D. C., Washington—C. H. Gaskins, 5913 Georgia Ave., N. W., erect 2-story, brick residence, 600 Oglethorpe St., N. W.

D. C., Washington—W. C. and A. N. Miller, 1119 17th St., N. W., erect 3-story, brick and frame residence, 2805 Forty-fourth St., N. W.; \$12,000; owners build.

D. C., Washington—Mitchell Quick, Tower Bldg., erect dwelling, 5826 Nevada Ave., N. W.; Lewis W. Giles, Archt., 1200 U St., N. W.

D. C., Washington—John P. Neff, 3306 McKinley St., N. W., erect dwelling, 3532 Edmunds St.; John W. Kearney, Archt., 1417 K St., N. W.

D. C., Washington—Mrs. Frederick C. Hicks, 1302 18th St., N. W., erect dwelling, 2511 Thirtieth St., N. W.; W. H. I. Fleming, Archt., 1707 I St., N. W.

D. C., Washington—Cooley Bros., 1405 K St., N. W., erect 9 dwellings, 3801-17 T St., N. W.; Geo. Santmyers, Archt., 1416 Eye St., N. W.

D. C., Washington—W. O. and N. T. Embrey, 306 Rittenhouse St., N. W., erect two 2-story, brick dwellings, 22-26 Madison St., N. W.; \$14,500.

Fla., Coconut Grove, Miami—Mrs. F. J. Sarmiento, care Paist & Stewart, Archts., Art Centre Bldg., Coral Gables, receiving bids for \$35,000 residence and garage, The Moorings; 2 stories, 73x73 ft., rein. conc., conc. block and stucco, rubber tile floors and tile wainscot in baths, tile roof, copper flashing, Quarry Key stone trim, Floridina marble, Cuban tile, rubber tile and cement tile floors, orna. iron grilles and balconies, International steel sash, elevator to tower room; following contractors estimating: O'Neill-Orr Construction Co., 212 N. E. Fourth St.; Sandquist & Snow, S. W. 27th Ave.; D. V. Godard, 145 N. E. 9th St.; R. G. Witters Co., 1745 S. W. Sixth St.; John B. Orr Co., 147 N. E. Sixth St.; Diegaard Builders, 3975 S. W. Eighth St.; Fred Howland, 1600 N. W. Fourteenth St., al Miami; Chas. C. Colby & Sons, Matilda St.; Coconut Grove; Rodney Miller, 2618 Alhambra Circle, Coral Gables.

Fla., Miami Beach—Tatum Wofford, Wofford Hotel, erect 2-story residence, 6387 Harding Drive.

Fla., Miami Beach—Mrs. Walter E. Bell, 1115 Fifth Ave., New York, and Miami Beach ready for bids for \$30,000 to \$35,000 residence, garage and servants' quarters; 2 stories, rein. conc., conc. block and stucco, tile and wood floors, tile baths, tile roof, steel sash, orna. iron and stone; landscaping; Wade & Oemler, Archts., Exchange Bldg., Miami.

Fla., Orlando—J. Brown acquired site for \$40,000 residence.

Fla., Palm Beach—L. E. Cofer erect \$25,000 residence, Barton Ave.

Fla., Palm Beach—Mrs. Alexander McKay, Via Bellaire, erect residence addition.

Fla., Atlanta—W. D. Hall, Boiling Jones Bldg., has low bid from F. P. Coleman, 35 W. Paces Ferry Road, for brick veneer residence; Daniell & Beuell, Archts., Georgia Sav. Bk. Bldg.

3-20

La., Alexandria—Harry L. Simon, 416 Elliott St., rejected bids for \$30,000 residence; bidders to refigure on revised plans; Herman J. Duncan, Archt., 120 Murray St. 3-13

La., New Orleans—John D. Fabacher erect brick veneer residence, Country Club Gardens near Fairway Drive, Jefferson Parish; 2 sto-

ries, tile roof, tile baths, oak floors, built-in features, hot water heaters; Weiss, Dreyfous & Seiferth, Archts., Maison Blanche Bldg.

La., New Orleans—Peter Copland, 721 Maritime Bldg., receives bids March 30 for double residence, 7825-27 Spruce St.

Md., Baltimore—Dr. Henry Strasser, Professional Bldg., plans \$15,000 frame dwelling and garage, 3 Englewood Road; Upman & Adams, Archt., Washington, D. C.

Md., Baltimore—Dr. James H. Ferguson, Medical Arts Bldg., erect \$12,000, 40x44-ft. dwelling, 4002 St. Paul St., Guilford; Frederick Thomas, Archt., 726 E. 33rd St.

Md., Baltimore—Richard Kleffer erect \$10,000 frame dwelling and garage, 319 Taplow Rd., Homeland; Cyril H. Hebrank, Archt., 3 E. Lexington St.

Md., Baltimore—E. J. McGraw, 110 St. Albans Way, erect dwelling and garage, 5205 Springlake Way, Homeland; Wilson P. Smith, Archt., Calvert Bldg.

Miss., Corinth—Albert Ajack erect 1-story, 42x42-ft., brick and stucco residence; oak floors; Polk Agee, Archt.; bids in.

Miss., Corinth—Miss Pauline Wheeler erect 1-story, 51x38 ft., brick veneer duplex; hardwood floors, comp. roof.

Mo., St. Louis—Carl J. Zeitler, 3935 N. Taylor Ave., erect 2-story and basement, 30x27 ft., brick dwelling, Ardsley Ave. near Bel Nor subdivision; Wedemeyer & Nelson, Archts., Wainwright Bldg.; bids in.

Mo., St. Louis—E. D. Koenitz, care Chas. A. Schulte, 2906 N. Grand Blvd., erect 2-story and basement, brick residence, Harris and San Francisco Sts.; bids in.

N. C., Charlotte—A. M. Webb plans residence, Providence Rd. near Charlotte.

N. C., Charlotte—Mangum Webb erect \$18,000 residence, Providence Rd.; M. R. Marsh, Archt., Builders Bldg.

N. C., Winston-Salem—Poindexter-Smitherman Co., Wachovia Bank & Trust Bldg., plans dwelling, Westfield, during Spring.

N. C., Winston-Salem—G. S. Angel plans residence, Westfield, during Spring.

Okla., Yukon—T. A. Kroutil, of Yukon Mill & Grain Co., plans 2-story, brick residence.

Okla., Yukon—Methodist Church plans to start work soon on parsonage.

S. C. Greenville—Woodside Cotton Mills, E. W. Woodside, Mgr., Woodside, rebuild five 6-room mill houses noted burned at loss \$10,000.

Tenn., Knoxville—Frank Lockett erect \$30,000, 2-story, brick and frame residence on Scenic Drive; slate roof, colonial type; Baumann & Baumann, Archts.; bids in.

Tenn., Memphis—Dr. W. R. Blue, 1024 Madison Ave., having plans prepared by Geo. Mahan, Jr., Manhattan Bk. Bldg., for 2-story, brick, stone, stucco and tile residence, Red Acres Subdivision; hardwood floors, tile roof.

Tenn., Memphis—Robert Haverty, 155 S. Main St., has low bid at \$18,163 from Robert Crouch, 63 S. Third St., for 2-story, 44x43 ft., brick residence, Bellair Woods; Ank. E. Hansen, Archt., Shrine Bldg.

Tenn., Memphis—Fritz Deutsch, 28 N. Claybrook St., soon let contract for 1½-story, 60x31 ft., brick veneer and stone residence, Goodlet and Walnut Grove Road; tile roof, hardwood floors; H. J. Kemer, Archt., 1756 Vinton Ave.

Tex., Dallas—Harold Abrams, Republic Bank Bldg., erect \$17,000 residence, 6222 Mercedes; brick veneer, 2 stories.

Tex., Houston—J. E. Sellman, 8360 Park Place Blvd., and T. E. Martin, 4403 Polk St., have permit for 48 three-room stucco dwellings, Harrisburg, \$30,000.

Tex., Port Arthur—Munger T. Ball, 346 Marshall Ave., has permit for \$55,000 residence, Griffing Park.

Va., North Tazewell—Harman Bros. and Norfolk & Western Ry. Co. both, reported, erect brick dwellings to replace burned structures.

## Government and State

D. C., Washington—David Lynn, Architect of the National Capitol, is having plans started by Bennett, Parsons & Frost, Archts., 80 E. Jackson Blvd., Chicago, Ill., for \$800,000 conservatory bldg., Botanic Gardens; site not determined; funds available.

Ga., Atlanta—State, Dr. L. G. Hardman, Gov., has low bid at \$161,333 from A. K. Adams Co., 542 Plum St., N. W., for repairs and improvements to State Capitol; Edwards & Sayward, Archts.; Robt. B. Logan, Asso. Archt., both 101 Marietta Bldg.

Md., Indian Head—Navy Dept., Bureau of Yards and Docks, Washington, D. C., has low bid at \$79,000 from Westinghouse Electric & Manufacturing Co., Pittsburgh, Pa., for turbo alternator and auxiliary equipment at Naval Proving Grounds.

N. C., Fort Bragg—Following contractors estimating on \$186,000 regimental barracks building, bids March 31 by War Dept., care Constructing Quartermaster, Fort Bragg: Brown-Harry Co., 237 E. Main St., Gastonia; Cabarrus Lumber Co., Kannapolis; Acme Lumber Co., Kernersville; W. P. Rose Co., Goldsboro; W. B. Barrow & Son, Professional Bldg.; J. N. Bryan & Son, Rogers Bldg.; York Construction Co., Odd Fellows' Bldg.; Howard E. Satterfield, 1201 Groveland Ave., all Raleigh; U. A. Underwood Co., Murchison Bldg., Wilmington; J. P. Rogers, Smithfield; Jones Bros. & Co., 203 Planters Bank Bldg., Wilson; W. L. Jewell; Joe W. Stout Co.; Jewell-Riddell Co., all Sanford; J. R. Owen, 1006 W. Lee St.; Fanning & Sweeney, Inc., Jefferson Bldg.; Angle-Blakford, American Bank Bldg., all Greensboro; Reinecke-Dixon Co.; F. H. Grimm; E. C. Derby, all Fayetteville; North Eastern Construction Co., Kent Road, Winston-Salem; S. S. Toler & Son, Rocky Mount; Southern Builders, Inc., Florence; V. L. Nicholson Co., 102 W. Clinch Ave., Knoxville, Tenn.; W. P. Thurston, 301 S. Fourth St., Richmond, Va.; A. C. Samford, 301 Washington Ave., Montgomery, Ala.; Townsend Lumber Co., Anderson, S. C.; plans call for 3 stories and basement, rein. conc. and steel, brick and hollow tile, limestone trim, steel sash, steel toilet partitions, metal door frames, steel treads, steel locker, built-up and tile roof. 3-20

Texas—Conference Comm. of Texas Legislature, Austin, approved \$650,000 appropriation for following improvements: Rehabilitation plant at Huntsville and provide additional hospital facilities, \$100,000; improve Darrington, Imperial, Harlem and Wynne farms, \$100,000 each; portable camp to cost \$50,000; \$50,000 building to house women prisoners on Gores farm. 11-7

Tex., Breckenridge—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C., reported, erect \$100,000 post office.

Tex., Fort Sam Houston, San Antonio—Constructing Quartermaster, Capt. Will R. White, receives bids March 31 (extended date) for signal communication center bldg.; brick, struct. clay tile, stucco and rein. conc., terra cotta, 2 stories and basement, 50x30 ft., cement, mastic and linoleum floors; steel sash, metal lath. 2-27

Tex., Lubbock—Lubbock County plans early election on \$250,000 courthouse and jail bonds.

Tex., Randolph Field, Schertz—Constructing Quartermaster, Capt. A. W. Parker, has low bid at \$29,800 from Bansbach Bros., 248 W. Josephine St., for guard house. 2-27

### Hospitals, Sanitariums, Etc.

Ala., Gadsden—Missionary Servants of Most Blessed Trinity, operating Holy Name of Jesus Hospital, have completed plans and specifications for \$750,000 hospital; probably soon call for bids: Colonial type, T shape, 8 stories, and 5 stories, including basement, sub-basement and tower room; about 900,000 cu. ft., 200 rooms, 120 patients' rooms; chapel seat 100; 3 operating rooms; elevators, elect. dumb waiter, subveyor for food trays, X-ray dept., special night light system, light call system; Schmidt, Garden & Erikson, Archts., 104 S. Michigan Ave., Chicago, Ill. 1-30

Ala., Gadsden—General Hospital Corp., A. W. Ralls, Pres., Dr. H. J. Savage, Chmn., Bldg. Comm., selected Wm. Leslie Welton, American Traders Bk. Bldg., Birmingham, as architect for \$250,000 Forrest General Hospital, 12th St. and Sixth Ave.; brick and stone, rein. conc., 3 stories, tile roof, steam heat, cement floors, stucco finish.

Ark., Harrison—Boone County Medical Society, Dr. W. H. Poyner, Member, Hospital Comm., has plans by Petter & McAninch, Inc., Pyramid Life Bldg., Little Rock, for \$25,000, 2-story and basement, brick, stone and conc., fireproof, municipal hospital; 35 rooms. 2-27

Ark., Helena—Hospital Assn., Mrs. W. H. Howe, Pres., plans \$150,000 hospital; election May 22 on bonds. 1-16

Ky., Mayfield—Mayfield Hospital, Inc., J. R. Pryor, Treas., Sixth and North Sts., erect \$18,000 addition; 2 stories and basement, 30x60 ft., brick, asbestos shingle roof, linoleum floors. See Want Section—Building Material and Equipment. 3-20

N. C., New Bern—Rev. R. I. Johnson, Rector, St. Cyrius P. E. Church, Colored, is chairman of group planning \$150,000 negro

hospital; \$75,000 to be given by Duke Foundation, Charlotte, N. C., \$35,000 by Rosenwald Fund, Chicago, Ill., and \$25,000 by Episcopal Diocese of Pennsylvania. 11-14

Okla., Mangum—Dr. Fowler and associates having plans drawn by Butler Co., Insurance Bldg., Oklahoma City, for \$100,000 hospital; brick and conc., 2 stories and basement.

Okla., Norman—State Bd. of Affairs, Oklahoma City, let contract about July 1 for \$150,000, 3-story ward building, Central State Hospital for Insane; plans by Engr. Dept. of State Bd. of Affairs.

Tenn., Chattanooga—Pine Breeze Sanatorium Bd. of Directors, J. J. Mahoney, member, having plans drawn by Wm. Crutchfield, Archt., 1st Natl. Bank Bldg., for men's bldg.; 34 beds, lockers, linen and equipment closets; dark red brick, stone trim, 2 stories and basement, terrazzo floors, steel sash, screened porches; work start when funds become available. 2-27

Tex., Liberty—Dr. H. Caplovitz and Dr. R. L. Harris having plans drawn by Leland Gabert, 1315 Bell St., Houston, for \$20,000 hospital, Travis St.; brick veneer, 2 stories. 3-20

### Hotels and Apartments

Tex., Big Spring—E. V. McCright & Co., Construction Bldg., Dallas, Gen. Contrs. for \$400,000, 15-story, 160-room hotel for W. R. Settles, Big Spring, want sub-bids until April 2; brick, tile, steel and rein. conc.; David S. Castle Co., Archt., Alexander Bldg., Abilene; Matthews & Kenan, Engrs., Smith-Young Tower, San Antonio. 10-31

Ala., Decatur—W. K. McNeill soon start work on 2-story, 8-apartment, LaFayette St.; English type.

D. C., Washington—Young Enterprises erect apartment, 1107-25 M St. N. E.; Geo. T. Santmyer, Archt., 1416 Eye St., N. W.

D. C., Washington—Henry J. Goodman Co., Inc., 1701 Pennsylvania Ave., N. W., erect \$15,000 store, 1707 Pennsylvania Ave., N. W.; Wm. I. Deming, Archt., 808 17th St., N. W.

D. C., Washington—Owner, care Milburn-Heister & Co., Archts., Hill Bldg., erect \$140,000, 5-story, limestone, 20-apartment building on Connecticut Ave.; slate roof, marble and tile floors, electric refrigeration, vapor heat; probably not take bids but award contract to Milburn-Heister & Co.

Fla., Miami—H. H. Bleile remodel apartment and erect 4-apartment addition, 367 1/2 S. W. 11th St.; Geo. Bruce, Archt., Biscayne Bk. Bldg.; bids in.

Fla., St. Petersburg—C. W. Fulwood, Jr., Archt., Taylor Arcade, completed plans for \$210,000, 6-story, 200x50 ft. hotel; steel frame, hollow tile walls, stucco, terra cotta and limestone trim, built-up roof, steam heat, 126 rooms, one freight and 2 passenger elevators.

La., Coushatta—A. H. Perry remodel former building of Bank of Coushatta on Carroll St. for apartment; 2 stories, brick.

La., Monroe—O. E. Hodge, Ruston, John S. Hunt, Hodge, and C. H. McHenry, Bernhardt Bldg., Monroe, erect \$500,000, 10-story, 70x172 ft., 250 room hotel, Jackson and Harrison Sts., to be leased to S. J. Thigpen, Corsicana, and S. W. Sibley, 1026 Tokalon Drive, Dallas, Texas; tentative plans are being prepared by Wyatt C. Hedrick, Inc., First Natl. Bk. Bldg., Fort Worth, Tex., and Eugene J. Sterns, A. O. U. W. Bldg., Little Rock, Ark.; upon completion of 2 sets of plans will determine upon plans that are best suited to the purpose.

Miss., Canton—Henry Trolley rebuild Hotel Trolley recently burned. 3-13

Miss., Jackson—Heidelberg Hotel, J. L. Latimer, Mgr., having plans prepared by Claude H. Lindsey, Jackson Tower Bldg., for 3-story, 93-room addition and remodeling present 5-story structure; \$200,000.

Mo., Warrenton—McGee Service Co., Inc., H. McGee, Pres., soon ready for bids for \$35,000, 3-story brick hotel.

Okla., Tulsa—J. & L. Lyons Investment Co., Tulsa Trust Bldg., considering erecting 3 or 4 story addition to Jefferson Hotel.

Okla., Oklahoma City—Mrs. Anna Wiener, 1111 N. Kelley St., ready for bids for \$20,000, 2-story, 38x50 ft., brick veneer apartment and \$15,000, 2-story, 45x60 ft. store and apartment; W. J. Laws & Co., Archts., First Natl. Bk. Bldg.

Okla., Sand Springs—Harry T. Pratt soon ready for bids for \$175,000, 4-story and basement, brick and stone, 200-apartment hotel; Smith & Senter, Archts., Philtower Bldg., Tulsa.

S. C., Columbia—Miss Esther O'Brien, owner of Jerome Hotel, having plans prepared by Wilson & Tatum, Columbia Natl. Bk. Bldg., for \$750,000, 14-story and basement, rein. conc. struc. steel, brick and tile, 250-room hotel addition; stone trim, built-up roof; Robert S. Fiske, Consrt. Engr., Healey Bldg., Atlanta, Ga. 1-30

Tenn., Memphis—Mrs. E. Felt, 874 W. Washington St., soon start work on \$10,000, 2-story, 90x32 ft., brick, 12-apartment, 381 Pontotoc St.; J. F. Davis, Contr., 1205 Drivr. Dept. of State Bd. of Affairs.

Tex., Austin—Mrs. L. C. Banks, Webbersville Road, erect \$12,700 apartment, 19th and Colorado Sts.

Tex., Harlingen—W. G. Bendas, 6529 Kenwood Road, Chicago, reported, considering erecting \$500,000 apartment hotel.

### Miscellaneous

Fla., St. Petersburg—St. Petersburg Country Club remodel clubhouse and erect addition to kitchen, improve golf course; \$20,000.

La., New Orleans—Sisters of Holy Family having prepared by Theard & Matthews, Balter Bldg., for 3-story, 257-200 ft., brick, fireproof building and chapel, 1900 Lafreniere St., for Home for Aged.

La., New Orleans—Commission Council considering ordinance providing for lease of public markets to Andrew Fitzpatrick, Baronne Bldg., and associates; Mr. Fitzpatrick plans organizing New Orleans Municipal Markets, Inc., to operate system; city plans to remodel 23 markets within 2 1/2 years at estimated cost of \$3,500,000; may issue bonds.

Miss., Lexington—Lexington Golf Club, H. L. Nichols, Pres., let contract to C. M. Journey, Greenwood, for drilling deep well to supply water for swimming pool; soon let contract for clubhouse, etc.; \$50,000. 3-20

Mo., Kansas City—Wagner Undertaking Co., J. W. Wagner, Pres., 204 W. Linwood Ave., erect \$25,000, 2-story, brick addition to funeral home; Braecklein & Bracklein, Archts., 719 Minnesota St.

Okla., Oklahoma City—Rancho Golf & Country Club, Perrine Bldg., plans \$150,000, 3 or 4-story, rein. conc. and stucco club house; tile roof, conc. floors, steam heat, Spanish design; let contract for basement to Tankersley Construction Co.; remainder of building not be built at present; Joe I. Davis, Archt., First Natl. Bk. Bldg. 10-3

Okla., Oklahoma City—D. M. Witt, Perrine Bldg., erect public market building on Classen St.

Tex., Corpus Christi—David Peel, 419 Water St., soon ready for bids for 2-story and basement, 50x100 ft., tile and stucco mortuary building; Hardy & Curran, Archts., Nixon Bldg.

Tex., McAllen—Kreidler Undertaking Co., M. L. Kriedler, plans mortuary building; architect not selected.

### Railway Stations, Sheds, Etc.

Okla., Oklahoma City—Chicago, Rock Island & Pacific Ry. Co., C. A. Morse, Ch. Engr., Chicago, and St. Louis-San Francisco Ry. Co., F. G. Jonah, Ch. Engr., St. Louis, plan to start work next month on \$2,500,000 union station; 360x222 ft., Bedford limestone, Moorish design; 2 platforms 1300 ft. long and one 1000 ft. long to be constructed back of station and covered with sheds. 1-25

Tex., Fort Worth—Texas & Pacific Ry. Co., E. F. Mitchell, Ch. Engr., Dallas, receives bids April 17 for 13-story, 210x60 ft., brick, stone, rein. conc. and steel passenger terminal and office building; 1-story, brick out-bound warehouse, 700 ft. long with width for 6 lanes of traffic; 8-story, 610x100 ft., brick and rein. conc. freight terminal and inbound warehouse; separate bids on plumbing, heating and electrical wiring; buildings to cost \$4,000,000; total expenditure \$8,000,000, including buildings, underpasses to buildings and moving tracks; city to spend \$2,000,000; Wyatt C. Hedrick, Inc., Archts., First Natl. Bk. Bldg.; following contractors estimating: Bates & Rogers Construction Co., 111 W. Washington St.; Geo. A. Fuller Co., 140 S. Dearborn St.; Wells Bros. Construction Co., 53 W. Jackson Bldg., all Chicago; Bellows-MacLay Construction Co., Construction Industries Bldg.; Central Contracting Co., Athletic Club Bldg.; Southwest L. E. Meyers Co., Allen Bldg., all Dallas; Thos. S. Byrne, Inc., Fort Worth Natl. Bk. Bldg.; Jas. T. Taylor, First Natl. Bk. Bldg., both Fort Worth; Struck Construction Co., 147 N. Clay St., Louisville, Ky.; The Ashton-Glassell Co., Shreveport, La.; Selden-Breck Construction Co., Fullerton Bldg.; Westlake Construction Co., Railway Exchange Bldg., both St. Louis, Mo.

Okla., Tulsa—J. & L. Lyons Investment Co., Tulsa Trust Bldg., considering erecting 3 or 4 story addition to Jefferson Hotel.

Okla., Oklahoma City—Mrs. Anna Wiener, 1111 N. Kelley St., ready for bids for \$20,000, 2-story, 38x50 ft., brick veneer apartment and \$15,000, 2-story, 45x60 ft. store and apartment; W. J. Laws & Co., Archts., First Natl. Bk. Bldg.

Okla., Sand Springs—Harry T. Pratt soon ready for bids for \$175,000, 4-story and basement, brick and stone, 200-apartment hotel; Smith & Senter, Archts., Philtower Bldg., Tulsa.

Tex., Harlingen — Chamber of Commerce petitioned Missouri Pacific Lines, C. S. Kirkpatrick, Ch. Engr., Union Station, Houston, to erect \$250,000 depot.

Tex., Sweetwater—Texas & Pacific Ry. Co., E. F. Mitchell, Ch. Engr., Dallas, plans \$150,000 passenger station.

### Schools

Ala., Athens—Bd. of Education soon call for bids for \$40,000 high school. 3-6

Ala., Birmingham — Howard College, Dr. John C. Dawson, Pres., plans to start work in May on student activities building, first unit of proposed building program; 2 stories, brick.

Ala., Center—Cherokee County Bd. of Education, W. L. Little, Supt., erect \$10,000, 1-story, brick high school auditorium addition.

Ala., Marion Junction—Alabama Polytechnic Institute, Auburn, soon ready for bids for brick office building, barn, superintendent's residence and five cottages on agricultural sub-station tract recently given the state by Dallas County near Marion Junction; supervision will be handled by Auburn Engr. 10-17

Ala., Mobile—Mobile County Bd. of Education, W. C. Griggs, Supt., ready for bids about May 15 for \$55,000, 12-room addition to Alba School at Bayou La Batre; J. Platt Roberts, Archt., First Natl. Bk. Bldg. 3-20

Ala., Mobile — Bd. of Education, W. C. Griggs, Supt., ready for bids about April 1 for \$65,000 gymnasium at Murphy High School; 1 story and basement, brick stone trim, built-up roof; Warren, Knight & Davis, Archts., Protective Life Bldg., Birmingham; Chandler C. Yonge, Asso. Archt., Mobile. 2-13

Ala., University—University of Alabama, Dr. D. J. Lloyd, Dean, erect addition to School of Chemical and Metallurgical.

Ark., Dover—See Ark., Hector.

Ark., Fayetteville—University of Arkansas, L. L. Browne, Supt. of Bldgs. and Grounds, rebuild carpenter shops noted burned at loss \$13,000.

Ark., Hector—Pope County School Bd., Tom J. Bullock, Supt., Russellville, received bids March 27 for \$25,000 school at Hector and \$5000 school at Scottsville; considering plans for high school at Dover and Jr. High in Russellville.

Ark., Russellville—See Ark., Hector.

Ark., Scottsville—See Ark., Hector.

Fla., Tallahassee—Bd. of Education, F. S. Hartsfield, Chmn., having plans prepared by Edwards & Sayward and Robt. B. Logan, Asso. Archts., Marietta Bldg., Atlanta, Ga., for \$250,000, 2-story and basement, rein. conc., struc. steel, brick and tile high school; comp. roof, stone trim, terrazzo floors, steam heat.

Ga., Athens—University of Georgia ready for bids about April 1 for \$100,000, 2-story and basement, 75x200 ft., rein. conc., struc. steel, brick and tile building; tile, terrazzo and wood floors; Hentz, Adler & Shutze, Archts., Candler Bldg.; Edw. F. Billie, Asso. Archt., Marietta Bldg., both Atlanta. 12-5

Ga., Columbus—School Bd., R. B. Daniell, Sec., receives bids April 3 for \$75,000, 1 and 2-story and basement, brick, stone trim negro vocational school, Eighth St. and 12th Ave.; plumbing and heating and wiring to be let separately; contain classrooms, mechanical shops, kitchen, laundry, cafeteria; plans from Smith & Biggers, Archts., Murrah Bldg. 2-22

Ky., Murray—Murray State Teachers' College, Dr. Rainey T. Wells, Pres., receives bids April 10 for library building and men's dormitory; \$125,000; separate bids on general contract, plumbing and sewerage, heating and electric wiring for each building and combination bids on same items for both buildings; plans from T. Tandy Smith, Jr., Archt., Guthrie Bldg., Paduach. 3-20

La., Farmerville—Union Parish School Bd. receives bids April 8 on \$40,000, 1-story, rein. conc. and brick auditorium-gymnasium addition to high school; built-up comp. roof; auditorium to seat 250 people; plans from J. W. Smith & Associates, Archts., Ouachita Natl. Bk. Bldg., Monroe. 1-23

La., Tickfaw—Tickfaw and Antioch School Dist. plans vote on \$20,000 bonds for grade school at Tickfaw.

La., Walker—Livingston Parish School Bd., H. O. Rodgers, Supt., Springfield, receives bids April 23 for \$40,000, 2-story, 112x117 ft., brick, stone trim school; auditorium to

seat 800; tile and comp. roof; plans by Wm. R. Burk, Archt., Balter Bldg., New Orleans.

Md., Baltimore—Bd. of Awards, City Hall, has low bid at \$20,548 from Avon Construction Co., 218 E. Lexington St., for alterations at play shelter of Public School No. 56, Thirty-sixth and Poole Sts. 1-2

Md., Baltimore—Municipal Architectural Coms., selected Frederick A. Fletcher, 13 W. Franklin St., as architect for \$150,000 addition to School No. 20, Eden and Federal Sts.; appointed John J. Zink, 2826 Overland Ave., as architect for \$78,000 addition to School No. 220, Washington Blvd. and Spence St.; also appointed Bernard Evander, 20 E. Lexington St., as associate of Paul Emmart, Archt., Union Trust Bldg., for School No. 53. 12-12

Miss., Horn Lake—Horn Lake Consolidated School Trustees, F. R. Wright, Nesbitt, ready for bids about May 1 for \$42,500 high school; 1 story, 135x54 ft., brick; W. G. Eckles, Archt., 302 Mt. Vernon St., Jackson. See Want Section—Building Material and Equipment. 3-20

Miss., Walnut Grove—Walnut Grove Consolidated School Dist. voted March 28 on \$60,000 bonds for brick school.

Mo., Half Way—Half Way Consolidated Dist. School Bd., J. C. Peterson, Sec., plans \$25,000, 1-story brick school.

Mo., Kansas City—University of Kansas City has gift of 40-acre site in Rockhill Dist., between 50th and 51st Sts., extending from Troost Ave. to Oak St.; William Volker donor, 3rd and Main Sts.

Mo., Marshall—Missouri Valley College, Geo. H. Mack, Pres., plans \$150,000 dormitory and \$125,000 science hall and museum building; brick; architect not selected.

Mo., Martinsville—Bd. of Education, J. Van Hoozer, Sec., ready for bids in April for \$25,000, 2-story, brick high and grade school; W. L. Perkins, Archt., Lucas Ave., Charlton, Iowa. 3-6

Mo., St. Louis—Bd. of Education, Geo. W. Sanger, Act. Commr. of School Bldgs., receives bids April 4 for \$10,000 West Belle School; separate bids for building, plumbing, sewerage and gas fitting, heating and ventilating, vacuum cleaning system, electric fixtures.

Okla., Altus—Bd. of Education, F. Nance, Clk., soon call for bids for building program to include high school, 2-room school south of Frisco tracks and 8-room ward school; plans for high school consists of 16 classrooms, auditorium to seat 900 people, 105x68 ft. gymnasium, study hall, library, laboratory, general science room, 2 rooms for domestic science, and manual training department of 2 rooms. cafeteria: \$225,000 bonds recently voted; Tonini & Bramblett, Archts., 416½ W. Main St., Oklahoma City. 3-13

Okla., Guthrie—School Bd., F. W. McVicer, Clk., erect \$70,000, 2-story and basement, brick and rein. conc., 12-classroom to replace Central Grade School; Roy W. Shaw, Archt., Enid; bids in. 2-6

Okla., Maud—Bd. of Education, J. H. Harris, Clk., has plans by Albert S. Ross, Ada, for \$95,000, 2-story, brick, stone and rein. conc. high school.

Okla., Norman—School Bd., W. L. Gibbs, Pres., soon call for bids for \$40,000 ward school; \$95,000 bonds voted for new schools and additions; Layton, Hicks & Forsythe, Archts., Braniff Bldg., Oklahoma City. 1-23

Okla., Sayre — City votes March 31 on \$33,000 bonds for school building.

Okla., Shawnee—School Bd., H. G. Faust, Supt., may call for bids this month for additions to Jefferson, Horace Mann, Woodrow Wilson, Washington Sr. High School and Sr. High gymnasium; \$150,000; A. C. Davis & Sons, Archts. 1-30

S. C., Clemson College—Clemson College Bd. of Trustees plans \$250,000 agricultural building.

S. C., Fort Mill—Fort Mill School Dist. No. 28 voted \$75,000 bonds for high school; Dr. J. B. Elliott, Chmn., Bd. of Trustees. 3-13

S. C., Loris—Bd. of Education erect \$35,000 high school.

Tenn., Allons — Overton County Bd. of Education, L. C. Harris, Supt., Livingston, plans school.

Tenn., Chattanooga—City Bd. of Education, Jas. A. Cash, receives bids April 4 for \$100,000, 3-story and basement, 175x100 ft., rein. conc., brick and tile Brainerd Jr. High School; separate bids on mechanical equipment; stone trim, comp. roof, steam heat; R. H. Hunt Co., Archt., James Bldg.; having

plans prepared by Clarence T. Jones, James Bldg., for \$80,000, 2-story and basement, 120x125 ft., brick addition to Glenwood School; stone trim, comp. roof. 3-6

Tenn., Chattanooga—Hamilton County Bd. of Education, Mrs. Harry Lacey, Chmn., having plans prepared by W. H. Sears, James Bldg., for \$125,000, 2-story and basement, rein. conc., brick and tile school; stone trim, built-up roof, terrazzo floors.

Tenn., Harrogate—Lincoln Memorial University, Dr. Hervin U. Roop, Pres., rebuild Avery Hall, noted damaged by fire; work to be done by local firms. 3-13

Tenn., Johnson City—Bd. of Education receives bids March 31 for \$27,500 Martha Wilder School unit. 3-13

Tex., Dallas—Southern Methodist University, Dr. Charles C. Soleiman, Pres., plans rebuilding chemical laboratory recently noted burned at loss \$30,000.

Tex., Dallas — Bd. of Education having plans prepared by C. H. Griesenbeck, Construction Industries Bldg., and soon call for bids for \$100,000, brick 14-room Obadiah Knight Elementary School.

Tex., Gonzales—Gonzales Ind. School Dist. voted \$40,000 bonds for 1-story, brick, fire-proof, 7-classroom and assembly hall grade school; ready for construction bids about April 10; Will N. Noonan Co., Archt., Builders Exchange Bldg., San Antonio. 3-6

Tex., High Island—High Island School Dist. voted \$12,000 bonds for school; C. E. Kennedy, Galveston County Supt. of Schools, Galveston.

Tex., Pampa—Pampa Ind. School Dist., Joe M. Smith, Bus. Mgr., having plans prepared by W. R. Kaufman & Son for 2-room, 4-room and 6-room additions to present ward schools, 10-room ward school, 12-room addition to Central High School, remodeling building into classroom and shop for vocational agricultural dept., converting classroom cottages into garage and shop for storing school trucks; \$200,000 bonds available.

Tex., Runge—Runge Ind. School Dist. votes April 2 on bonds to replace high school recently noted burned at loss \$75,000; 2 stories, brick and rein. conc., 14 classrooms and auditorium; Glesecke & Harris, Archts., Norwood Bldg., Austin; A. E. Cutler, Sec., Bd. of Education. 1-20

Tex., San Angelo — City voted \$150,000 bonds for addition to following elementary schools: Reagan School—4 rooms; Ft. Concho School—2 rooms; San Jacinto School—4 rooms; Santa Rita School—2 rooms; Stephen F. Austin—4 rooms; South Mexican School—2 rooms; also unit at Senior High School to consist of 2 classrooms, gymnasium and basketball court with baths, lockers and equipment for boys, physical education room for girls with baths, lockers and equipment; Felix E. Smith, Supt., Bd. of Education; Anton F. Korn, Archt., San Angelo Natl. Bk. Bldg., San Angelo, and Thomas Bldg., Dallas; C. C. Alexander, Asso. Archt., San Angelo. 2-20

Tex., Wichita Falls—Bd. of Education, W. W. Brown, Sec., ready for bids about April 1 for 4-room additions to Ben Franklin, Huey and Alamo schools and cafeteria and auditorium addition to Washington School; Voelcker & Dixon, Archts., Perkins-Snider Bldg. 3-13

Va., Woodberry Forest—Woodberry Forest School has low bid from Harrisonburg Building & Supply Co., Harrisonburg, for school; John M. Donn, Archt., 1223 Connecticut Ave., Washington, D. C.

W. Va., Huntington—Huntington Ind. School Dist. votes May 3 on \$1,790,000 bonds for following building program: East Junior-Senior High School, \$306,000; additional unit to Guyandotte elementary school, \$45,000; Peyton building in Walnut Hills, \$85,000; Gallaher addition, \$59,000; Gallaher District Jr. High, \$140,000; Central Jr. High addition, \$30,000; Lincoln elementary unit, \$40,000; Meadows building, \$28,000; Simms elementary unit, \$28,000; Cammack elementary building, \$107,000; Johnston additional unit, \$67,000; West Jr.-Sr. High, \$220,000; Westmoreland, \$109,000; Barnett additional unit, \$25,000; Douglas, \$6000. 3-6

### Stores

Ala., Five Points—Mrs. Mary S. Ware, care Dr. Sedley Ware, University of the South, Sewanee, Tenn., soon start work on \$50,000, 1-story, 50x114 ft., Limestone front building, 20th St. and Magnolia Ave., to be occupied by Hyman Mayerberger's Variety Store, Five Points Shoe Hospital and Doster-Northington Drug Store; Miller & Martin, Archts., Title Guaranty Bldg.; J. A. Lewis,

Engr., 3709 N. 27th St., both Birmingham: Birmingham Trust & Savings Co., Birmingham, handling details.

Ark., Ola—J. C. Davis soon begin work on brick business building on Fourche Ave.

D. C., Washington—Peter Magg's erect 3 stores, 1906-10 Seventh St., N. W.; A. S. J. Atkinson, Archt., 3801 Macomb Ave.

D. C., Washington—Terminal Refrigerating & Warehousing Corp., Simeon T. Price, 4½ and D Sts., plans remodeling building, 12th and E Sts., for stores; \$100,000; Pringle & Arnold, Archts., 1315 Half St., S. E.

Fla., Ocala—E. T. Helvenston, Holder Block, plans to remodel and erect 1 or 2-story addition to old Central Bk. Bldg. on Ockawaha Ave.; 28x60 ft., brick.

Ga., Brunswick—S. H. Kress Co., care Engr. Dept., 114 5th Ave., New York, remodel 2-story, brick, stone trim store; built-up roof; bids in.

La., Alexandria—H. H. Harris, 2040 Mary St., has low bid at \$14,345 from Tudor & Ratcliff for 1-story, rein. conc. and brick, 3-story building, 4th and Murray Sts.; built-up comp. roof; E. Lee Ball, Archt., Haas Bldg.

Miss., Jackson—Claude H. Lindsley, Archt., Jackson Tower Bldg., prepared plans for remodeling Fitzhugh property on Roach St. between Capitol and Pearl Sts.; \$15,000; put in 6 new store fronts, recondition interior; Currie & Corley, Raleigh, low bid at \$12,600.

Mo., Carthage—Jerry Howard erect two 1 or 2-story brick stores; \$25,000.

Mo., St. Louis—P. J. Farrington & Son Furniture Co., 4519 Easton Ave., soon ready for bids for alterations and addition to 2-story brick building; \$25,000; F. J. Kolb, Archt., 3855 Shaw Blvd.

N. C., Winston-Salem—Central Terrace Co. purchased ten 1-story store rooms, Second and Chestnut Sts., and remodel.

Tex., Dallas—W. W. and H. W. Fisher, 3504 Lexington St., erect \$15,600, 2-story brick building, 2113-15 Griffin St.

Tex., Fort Worth—Thos. S. Bryne, Inc., Engrs. and Gen. Contrs., Fort Worth Natl. Bk. Bldg., advise that contract has not been awarded for store for Leonard Brothers, Marvin Leonard, 111 N. Houston St., and

that plans will be complete within 30 days; plans by Elmer G. Withers, Homes Bldg., call for \$250,000, 8-story and basement, brick and rein. conc. building. Contract recently incorrectly let to this firm. 2-6

Tex., Houston—Dr. E. M. Armstrong, Union Natl. Bank Bldg., soon let contract for 2-story, 75x75 ft., rein. conc., hollow tile and stone building, Dallas Ave. and Louisiana St.; stone trim, tar and gravel roof, steam heat.

Tex., San Antonio—R. H. Hemley, care Marvin Eickenroth & Bartlett Cocke, Archts., Maverick Bldg., ready for bids about April 5 for 1 and 2-story, 160x60 ft., brick, tile and stucco store, Fredericksburg Road between Ashby and French Sts.

Va., North Tazewell—H. G. Peery & Sons rebuild stores noted burned.

W. Va., Parkersburg—S. S. Kresge Co., Kresge Bldg., Detroit, erect 2-story, 42x131 ft., brick and stone store.

### Theaters

Va.-Tenn., Bristol—Bristol Theatre Corp., Wm. P. Engel, Sec.-Treas., 1901 First St., Birmingham, Ala., having plans prepared by McDonald & Co., Southeastern Trust Bldg., Atlanta, Ga., and plans to let contract by May 1 for \$225,000, 2-story, rein. conc., struc. steel, brick and tile, stone trim theatre to be leased to Paramount-Laskey Corp., New York, Meyer & Engel, Southern Representatives, 1901 First St., Birmingham. 3-13

### Warehouses

Ga., Valdosta—Savannah Avenue Tobacco Warehouse Co., T. C. Geary, F. H. Wright and Guy H. Briggs, Jr., Lexington, Ky., and Leslie Alphin, Valdosta, petitioned for charter; company to be capitalized at \$50,000; erect warehouse to contain 50,000 sq. ft. floor space.

Md., Baltimore—Jacobs Transfer Co., Inc., 113 Florida Ave., N. E., Washington, D. C., plans depot, Lee St. between Light and Charles Sts., for forwarding and transporting express and freight, 113 Florida Ave., N. E.

Va., North Tazewell—Tazewell Supply Co. rebuild warehouse noted burned.

Va., North Tazewell—Harman Brothers rebuild warehouse noted burned.

## BUILDING CONTRACTS AWARDED

### Bank and Office

Ala., Greenville—Bank of Greenville and First National Bank merged; started remodeling buildings; \$10,000, remove adjoining walls, redecorate; Jehle Brothers Contracting Co., Contr., Montgomery.

D. C., Washington—American Security & Trust Co., 15th St. and Pennsylvania Ave., let contract for \$1,500,000 addition to bldg. to George A. Fuller Co., Munsey Bldg., Washington; brick and stone, 10 stories; York & Sawyer, Archts., 100 E. 42nd St.; Meyer, Strong & Jones, Mech. Engrs., 101 Park Ave., both New York. 2-13

Ga., Augusta—John P. King Manufacturing Co., S. F. C. Bldg., let contract at about \$11,500 to J. B. Mobley for office bldg., Goodrich St.; brick and hollow tile, 1 story and basement, 54x41 ft., hardwood floors, asbestos shingle roof; Scroggs & Ewing, Archts., S. F. C. Bldg.

La., St. Francisville—J. H. Fitzgerald, 2645 Washington Ave., Baton Rouge, has contract for addition to Democrat Bldg.; 30x25 ft., brick, conc. floor, metal window frames; Mackie & Goodman, Archts.

Mo., Kansas City—Dierks Investment Co., Devere Dierks, Gates Bldg., reported, let contract to Kansas City Structural Steel Co., 21st and Metropolitan Ave., for 600 tons fabricated struct. steel for 10 additional stories to 7-story Gates Bldg.; \$75,000. 3-20

Okl., Boise City—Methodist Church let contract at \$22,442 to Jas. Klostermeyer, Perry, for brick and stone trim bldg.; 1 story and basement, 60x65 ft., comp. roof; Smith & English, Archts., Hutchinson, Kan. 2-6

Okl., Sayre—Beckham County Abstract Co. let contract to H. C. Cosner for 40-ft. extension to office building on E. Main St.

Tenn., Knoxville—Fidelity-Bankers Trust Co., 428 S. Gay St., let contract to Weaver &

McGill, General Bldg., to remodel 3 upper floors of bldg.; \$50,000; Baumann & Baumann, Archts., 813½ Market St. 1-9

### Churches

Miss., Jackson—Griffith Memorial Baptist Church let contract at \$34,095 to Currie & Corley, Raleigh, for rein. conc., brick and stone trim bldg.; 114x53 ft., rein. conc. foundation, wood floors, comp. roof; N. W. Overstreet, Archt., Mississippi Fire Bldg., Jackson.

Miss., McComb—Friendship Baptist Church, J. D. Fitzgerald, Chmn., Bldg. Comm., let contract to W. W. Easley, Magnolia, for \$10,000, 1-story and basement, brick or conc. building; plans by Baptist Sunday School Board, Nashville, Tenn. 12-5

Mo., St. Louis—Second Presbyterian Church, Rev. John W. McIver, 4501 Westminster Place, soon start work on \$250,000, 4-story and basement, 118x110-ft., brick and conc. fireproof Sunday school building; Kellermann Contracting Co., Contr., Buder Bldg.; LaBeaume & Klein, Archts., American Trust Bldg.; Brussel & Viterbo, Struct. Engrs., Arcade Bldg. 8-29

Okl., Sayre—First Methodist Church, Rev. T. W. Weeks, Pastor, let contract at \$15,298 to S. P. Hughes, 1318 Linwood St., Oklahoma City, for brick Sunday school; stone trim, 41.6x48.0 ft.; plans to let contract for auditorium upon completion of this building; total \$40,000; Hawk & Parr, Archts., 1019 Hales Bldg., Oklahoma City. See Want Section—Building Material and Equipments. 3-20

Tex., Houston—Svoboda Church Furniture Co., Kewanee, Wis., has interior decoration contract for \$750,000 St. Paul's M. E. Church under constr.; Alfred C. Finn, Archt., Bankers Mtg. Bldg.; Southwestern Construction Co., Contr., West Bldg., both Houston. 10-24

Va., Lynchburg—Methodist Protestant Church, Rev. J. H. Lynch, Pastor, let contract to J. A. Fix & Sons, Lynch Bldg., for \$25,000 Sunday school.

### City and County

Okl., Stillwater—Payne County Bd. of Commrs., Ed. T. Tachter, Chmn., let contract to W. R. Montgomery, Cushing, for 50x80 ft. poultry building; let contract to P. P. Powell, Cushing, for repairs to live stock building.

Tex., Bonham—Fannin County Commrs. rebuild burned courthouse; use present walls; Wyatt C. Hedrick, Inc., Archt., First Natl. Bk. Bldg., Fort Worth; Sparger & Peters, Asso. Archts., Bonham; contract let. 3-13

Tex., San Antonio—Travis Electric Co., Medical Arts Bldg., has electrical fixture contract at \$8000 for Carnegie Library; Herbert S. Green, Archt., Alamo Bk. Bldg.; W. E. Simpson Co., Engr., Milam Bldg. 2-27

### Dwellings

Ala., Birmingham—Wm. McWane, 2810 Carlisle Rd., erect \$40,000 brick veneer residence, Mt. Brooke Estates; 2 stories, slate roof, steam heat; Chas. M. McCauley, Archt., Jackson Bldg.; L. E. Ford, Contr., Mt. Brooke Estates.

Ala., Birmingham—J. B. Coleman, 30 Clermont Drive, erect \$30,000 brick veneer residence, Forest Glen; 2 stories, tile roof, steam heat; Warren, Knight & Davis, Archts., Protective Life Bldg.; L. E. Ford, Contr., Mt. Brooke Village.

Ala., Birmingham—Mrs. W. P. Breen, Jackson Bldg., erect stone veneer, stucco and half-timber residence, Mayfair; 2 stories and basement, 87x30 ft., slate roof, steam heat; Denham & Denham, Archts., Comer Bldg.; owner builds.

D. C., Washington—Mrs. P. J. Nee, care J. J. Whelan, Archt., 1147 Connecticut Ave., N. W., erect \$40,000 residence and garage, 2859 Woodland Drive, N. W.; brick, 2½ stories; \$130,000; Geo. T. Santmyers, Archt., 1418 I; owner builds; work will not start for about 6 months.

D. C., Washington—N. L. Sansbury Co., 1418 I St., N. W., plans 8 dwellings and garages, Courtland Place near 28th St.; brick, 2½ stories; \$130,000; Geo. T. Santmyers, Archt., 1418 I; owner builds; work will not start for about 6 months.

Fla., Coral Gables, Miami—A. F. Becker, 129 N. E. First St., Miami, erect \$35,000 dwelling, garage and servants' quarters; 2 stories, rein. conc. block and stucco, tile and wood floors, tile baths, tile roof, steel sash, orna. iron, orna. stone; landscaping; Wade & Oemler, Archts., Exchange Bldg., Miami; owner builds.

Fla., Miami Beach—J. V. Daniels, care A. Frazer Rose, Archt.-Engr., 537 Collins Ave., erect rein. conc. block and stucco residence, 51st Terrace; 2 stories, 80x75 ft., tile and oak floors, tile roof, 3-car garage and servants' quarters; day labor.

Fla., Miami Beach—G. Pratt Cramer, Atlantic City, N. J., present address care Flamingo Hotel, Miami Beach, reported, let contract to C. E. Shappell, 1350 Collins Ave., for 2 dwellings—one on Alton Road and one on N. Bay Road. 3-20

Fla., Miami Beach—Mrs. C. P. Russ, 335 Forty-seventh St., erect \$17,500 residence, Rivo Alto Island; rein. conc., conc. block and stucco, 1 and 2 stories, tile and wood floors, tile and comp. roof, steel sash; John & Coulton Skinner, Archts., French Village, LeJeune Rd., Coral Gables; Riley & Knight, Contrs., 838 N. W. Fourth St., Miami.

Fla., Miami Beach—Mrs. Eloise Egan, 1020 Collins Ave., add second story to residence; \$12,000; Louis Wessell, Contr., 305 Twenty-third St.

Fla., Miami Beach—C. W. Chase, Jr., 1778 West Ave., let contract to R. G. Witters Co., 1745 S. W. Sixth St., Miami, for \$25,000 residence, Meridian Ave. and 19th St.; Russell Pancoast, Archt., Lincoln Rd., Miami Beach. 3-20

Fla., Miami Beach—H. U. Birdseye erect \$25,000 residence, Rivo Alto Island; rein. conc., conc. block and stucco, 3 stories, wood and tile floors, tile roof, steel sash, orna. iron, cast stone, about 4 baths; John & Coulton Skinner, Archts., French Village, Leeune Rd., Coral Gables; sketches approved; work probably start in Fall.

Fla., Miami Beach—Chas. A. McCulloch, 4545 Collins Ave., let contract at \$50,000 to R. W. Edholm, Inc., 835 Lincoln Rd., to alter and erect additions to residence; 2 stories, tile and terrazzo floors, old Cuban tile roof, rein. conc. foundation; Russell T. Pancoast, Archt., Lincoln Rd.; work to start April 1. 3-20

Fla., St. Petersburg—E. M. Eustis, 516 16th Ave., N. E., erect \$15,000 stucco resl-

dence, 1345 Brightwaters Blvd.; Brown & Parish, Archts., 26 Beach Drive, N.; M. J. Bennett, Contr.

Ga., Atlanta—E. M. Brown, 278 12th St., N. E., let contract to Ben H. Burgess, 1230 Gordon St., N. W., for \$35,000, 2-story and basement, brick residence on Peachtree Road, N. E.; stone trim, tile roof, hardwood and tile floors, steam heat; Edwards & Sayward, Archts.; Robert B. Logan, Asso. Archt., both Marietta Bldg. 3-13

Ga., Atlanta—Dr. R. A. Bartholomew, 104 Ponce de Leon Ave., N. E., let contract to Collins, Holdbrook & Collins, Atlanta Tr. Co., Bldg., for \$75,000 residence, Lullwater Rd., N. E.; brick veneer, conc. footings, 2 stories and basement, 5 tile baths, hardwood floors, slate and comp. roof, steam heat; Eduard Clerk, Archt., Henry Grady Bldg. 1-9

Ga., Atlanta—Kenyon B. Zahner, 45 Peachtree-Battle Ave., let contract to Gilbert Beers, Bona Allen Bldg., for residence addition: \$17,000; brick veneer, limestone trim, 2 stories and basement, 68x35 ft., hardwood and tile floors, slate and tin roof; Burge & Stevens, Archts., 101 Marietta Bldg. 3-13

Ga., Atlanta—C. MacWilliams, erect \$10,000 residence; brick veneer, 1 story and basement, comp. shingle roof, hot air heat; owner builds.

Ga., Atlanta—Dr. C. A. Lee, Atlanta National Bank Bldg., erect \$20,000 residence, Mycill Rd., near Collier Rd.; brick veneer, 2 stories and basement, 2 baths, hardwood floors, tile baths, comp. shingle roof, steam heat; Lalowick Hill, Jr., Archt., Atlanta Natl. Bk. Bldg.; day labor.

Ga., Atlanta—Dr. Sidney L. Davis, 36 Piedmont Ave., N. E., erect \$12,000 residence; brick veneer and native stone, 2 stories and basement, 3 baths, hardwood and tile floors, tile or slate roof, steam heat; R. S. Monday, Archt., Norris Bldg.

La., Shreveport—Loy L. Beene, 1801 Crescent St., let contract at \$15,000 to F. D. Welch, Elmwood St., to remodel residence, 4420 Fairfield Ave.; 2 stories, 35x50 ft., oak floors, asbestos shingle roof; Seymour Van Co., Archt., City Bk. Bldg.

Md., Baltimore—B. Constable, 311 W. 31st St., erect 2 brick and stucco dwellings and garages, 4301-03 Wickford Rd.; 2 stories, 24x18 ft. and 38x52 ft., slate roofs, gas heat; W. P. Smith, Archt., 3434 Piedmont Ave.; owner builds.

Md., Baltimore—H. Findley French, Munsey Bldg., erect \$15,000, 2-story, brick dwelling and garage, 4116 N. Charles St.; slate roof, hot water heat; Wyatt & Nolting, Archts., Keyser Bldg.; Clarence L. Jarvis, Bldr., 3604 Woodbine Ave.

Md., Baltimore—G. W. Schoenhals Co., Munsey Bldg., erect 6 brick dwellings, 31st St. and Cresmont Ave.; 2 stories; owner builds.

Md., Baltimore—Harry F. Shaw, Jr., Morley and St. Joseph Sts., erecting 5 group dwellings, 100-08 Morley St.; brick, 2 stories, 19x32 ft., hardwood floors, slag or comp. and slate roofs; F. E. Beall, Archt., 334 St. Paul St.; owner builds. See Want Section—Building Material and Equipment.

Md., Baltimore—Henry Strasser, Professional Bldg., erect \$15,000 frame residence and garage, 3 Englewood Rd.; 2 stories, 42x25.6 ft., slate roof, hot water heat; Upman & Adams, Archts., Woodward Bldg., Washington, D. C.; Henry T. Sorrell & Son, Contrs., 4112 Kathland Ave.

Md., Baltimore—Home Improvement Co., 3363 Frederick Ave., erect \$10,000 dwelling, 6302 W. Fordham Ave.; stucco; Harold Apleton Stillwell, Archt.; Peyton B. Strobel Construction Co., Contr., both 206 E. Lexington St.

Mo., St. Louis—J. Chas. Mueller & Son, 3528 Hebert St., erect three 1-story and basement, 34x30, brick dwellings, 3734-48 Oakmont Drive; \$20,000, comp. shingle roofs, hardwood floors; Nolte & Naumann, Archts., 3832 W. Pine Blvd.; owner builds.

Mo., St. Louis—Edw. A. Grone, 6432 San Bonita St., excavating for \$12,000, 1½-story, 32x41 ft., brick residence, Clayton and McKnight Roads; shingle roof, hardwood floors, hot water or vapor heat; Kuhn & Kuhn, Contrs., 5812 Columbia Ave.

Mo., St. Louis—M. Elchinger, 4931 Quincy St., excavating for \$12,000, 2-story and basement, 27x31 ft., brick residence, 4147 Kingshighway; A. L. Kappler, Contr., 4330 Kings-

highway; C. E. Stevens, Archt., 5417 S. Grand Blvd.

Mo., St. Louis—Eugene P. Niehaus, 3872 Bowen St., started work on two 1-story and basement, 25x40 ft., brick residences, 4009-11 Leona St.; owner, Archt.-Bldr.

Mo., St. Louis—Gregory J. Nooney, 5471 Queens Ave., started work on \$12,000, 1½-story, 37x37 ft., brick residence on Bellier Drive, Country Club Addition; Frein Masonry & Construction Co., Contr., 3817 Forest Park St.

Mo., St. Louis—O. L. Hasterok, 5219 Litts Ave., started work on \$10,000, 2-story and basement, 28x30 ft., brick residence, 4145 Kingshighway; slate roof, hardwood floors; owner builds.

Mo., St. Louis—M. C. Bartels, 4910 Gravois Blvd., erect ten 1-story, 25x37 ft. brick dwellings, 5504-22 Newport St.; \$35,000; comp. shingle roofs, hot air heat; owner, Archt.-Bldr.

Mo., University City, St. Louis—Benj. F. Berry, 4555 Washington St., excavating for \$15,000, 2-story and basement, 41x30 ft., brick dwelling, 7167 Westmoreland Drive; tile roof, hardwood floors, hot water heat; Melvin H. Frese, Archt., 7014 Glenmore St.

N. C., Charlotte—W. D. Flinton, 609 Selwyn Ave., erect \$10,000 residence, 407 Radcliffe Ave.; brick veneer, 8 rooms, comp. roof; day labor.

N. C., Winston-Salem—Crouse-Evans Realty Co., Farmers Bank Bldg., started work on brick dwelling, Westfield.

S. C., Fingerville—C. C. McMillen erect \$16,000 residence by day labor; brick veneer; Carlisle & Freeman, Archts., 110½ Kennedy Place, Spartanburg.

Tenn., Lookout Mountain—J. B. Pound directed Glascock, Bright & Co., Hamilton Natl. Bank Bldg., Chattanooga, to erect 5 residences, \$10,000 each.

Tenn., Lookout Mountain—Peyton L. Carter, 213 Mississippi Ave., let contract to Smith Bros., 211 E. Tenth St., for \$25,000 brick residence; stone trim, 2 stories and basement, 90x25 ft.; W. H. Sears, Archt.; Percy H. Shepherd, Asso. Archt., both 1201 James Bldg., all Chattanooga. 3-6

Tenn., Memphis—J. L. Driver, Jr., Byrd Bldg., erect 2-story, 53x39 ft., brick veneer residence, Red Acres Subdivision; oak floors; owner, Archt.-Bldr.

Tenn., Memphis—A. Y. Pearson, Derman Bldg., soon start work on \$10,000, 2-story, brick veneer, 10-room residence, 2742 Central Ave.; hardwood floors, tile baths, hot water heat; owner builds.

Tenn., Memphis—W. C. Manley, 445 N. McNeal St., erect \$15,000, 1½-story and basement, brick veneer residence, Cherokee and Lombardy Sts.; owner, Archt.-Bldr.

Tenn., Nashville—S. P. Moore, Hillsboro Rd., let contract at \$31,067 to W. F. Holt, 209 Church St., for hollow tile and brick veneer residence; 2 stories, 102x46 ft., wood floors, tile roof, brick foundation; Hart & Stone, Archts., 602 Hitchcock Bldg.; work soon start. See Want Section—Building Material and Equipment.

Tex., Brownsville—Dean Porter let contract at \$16,260 to W. A. Velten for Spanish type residence; struct. clay tile and stucco, rein. conc., 2 stories, 87x58 ft., tile roof, conc. slab, wood and tile floors; R. Newell Waters, Archt., Security State Bank Bldg., Weslaco; W. E. Simpson Co., Engr., Milam Bldg. 3-13

Tex., Houston—M. G. Worrall erecting 2 brick veneer dwellings, 2300 block Quenby Rd.; 6 rooms; \$6500 each.

Tex., Houston—Mrs. L. Repsdorph let contract to F. A. Goldapp, 102 York St., for \$10,000 brick veneer residence, 1904 Bolsover Rd.; 7 rooms; work under way. 3-20

Tex., Houston—P. C. Scullin erect \$18,000, story, brick veneer, 10-room residence, 2518 Riverside Drive; The Russell Brown Co., Contr., 3104 Main St.

Tex., Port Arthur—Munger T. Ball, 346 Marshall Ave., let contract to L. W. Lindsay, 2nd Natl. Bank Bldg., Houston, for \$55,000, 2-story residence in Griffin Residential Park.

Tex., San Antonio—H. C. Thorman, Bldr., 605 N. St. Mary's St., start work on 2 two-story rock dwellings, Melrose Ave. Olmos District; plans completed for 6 additional dwellings.

Tex., Sherman—W. H. Altman let contract to Wentzel & Wood for \$22,000, 2-story, brick colonial residence, S. Crockett St. and Mocking Bird Lane; slate roof, 10 rooms and 3 baths; clyce & Rolfe, Archts.

Va., Bonuny Blue—Blue Diamond Coal Co., Inc., Knoxville, Tenn., let contract to R. H. Hamill Co., R. & P. Bldg., Huntington, W. Va., for dwellings in connection with \$1,000,000 development. 2-20 under Coal Mines and Coke Ovens.

### Government and State

Ga., Fort Benning—Constructing Quartermaster, Lt. W. M. Allison let contract at \$407,548 to Algernon Blair, First Natl. Bk. Bldg., Montgomery, Ala., for 41 sets of officers quarters for U. S. Infantry School; each 2 stories and basement, 38x42 ft., red oak floors, brick and hollow tile, cast stone sills, Mission tile roof; work to start in about 10 days. See Want Section—Building Material and Equipment. 3-6

Okla., Fort Sill, Lawton—Constructing Quartermaster, Lt. N. H. Cherry, drawing plans for \$17,000 dry cleaning plant addition to laundry; probably brick with slate roof, conc. floor, steel roof trusses and fireproof; 1 story, 30x136 ft.; plans not yet approved. 3-20

Tenn., Memphis—Christie Cut Stone Co., 2082 Elzey St., Memphis, has exterior stone contract for \$1,500,000 remodeling and extension of custom house, courthouse and post office bldg.; 150 tons rein. steel, Laclede Steel Co., Arcade Bldg., St. Louis, Mo.; National Construction Co., Inc., Constr., Glenn Bldg., Atlanta, Ga. 2-20

### Hospitals, Sanitariums, Etc.

Mo., Kansas City—Jewish Memorial Hospital Assn., Henry A. Auerbach, Pres., Dwight Bldg., let contract to Long Construction Co., Rialto Bldg., and ground has been broken for \$850,000 Schloss Memorial Jewish Hospital, 50th St. and Troost Ave.; 6 stories and basement, fireproof, terrazzo, conc. and tile floors, slate and comp. roof, soundproof partitions, 129 beds, 5 operating rooms, radios with head phones in each private room; Schmidt, Garden & Erikson, Archts., 104 S. Michigan Blvd., Chicago, Ill.; Greenebaum, Hardy & Shumacher, Consult. Archts., Scarritt Bldg. 11-7

Mo., St. Louis—Washington University School of Medicine Bd. of Directors, Edwin H. Steedman, Pres., erect 4 additional stories to \$1,000,000, 10-story building under construction, Kingshighway and Euclid Ave., to house McMillan Eye, Ear, Nose and Throat Hospital and Oscar Johnson Institute of Research in Ophthalmology and Oto-laryngology; will start campaign to raise \$1,200,000 to complete financing of 14-story structure; Jamieson & Spearl, Archts., Arcade Bldg.; Woermann Construction Co., Contr. 12-5

Mo., St. Louis—St. Luke's Hospital has permit for \$10,000 smokestack, 721 N. Belt St.; brick and conc.; Wiederholdt Construction Co., Archt.-Contr., Natl. Bk. of Commerce Bldg.

### Hotels and Apartments

D. C., Washington—W. S. Phillips & Co., Inc., 1501 K St., erect \$900,000, 5-story, brick, 168-apartment building on Connecticut Ave.; Louis Justement, Archt., 16 Jackson Place; owner builds; no contracts let.

Ga., Atlanta—Tom James, care Ellison & James, Healey Bldg., excavating for \$75,000, 2-story and basement, brick veneer, 34-apartment on Peachtree and Huntington Roads; stone trim, hardwood floors, comp. roof, steam heat; owner builds.

Md., Baltimore—E. A. Lev, Pres., Keystone Construction Co., 2309 Sulgrave Ave., Mt. Washington, erect \$80,000, 3-story, brick, 12-apartment, 30th and St. Paul Sts.; L. R. White, Archt., Court Square Bldg.; owner builds.

Miss., Jackson—Foster & Creighton Co., Protect Life Bldg., Birmingham, Ala., have contract at \$18,564 for foundation and first floor of \$700,000, 12-story, 108x120 ft., rein. conc., brick, granite, terra cotta, 300-room Robert E. Lee Hotel, Lamar and Griffith Sts., for The Gammill Co., Stewart Gammill, Pres., Sivley Ave., Jackson; Connors Steel Co., Empire Bldg., Birmingham, has contract for rein. steel; 3 passenger elevators and one service elevator, roof garden 45x52 ft., Spanish tile roof; bids for superstructure April 17; C. H. Lindsey, Archt., Jackson Tower Bldg.; A. H. Alvis, Company director and Manager. 3-20

Mo., St. Louis—F. and E. Braun, 3425 Meramec St., erect \$10,000, 2-story, 37x45 ft. brick tenement, 3923-25 Dunnica St.; comp. roof, hot air heat; C. A. Koenig, Archt., 2036 Russell St.; owner builds.

Mo., St. Louis—A. Dreyer, erect \$10,000, 2-story, 34x46 ft., brick tenement, 4710-12 Newport St.; Zeppenfeld Inc. Construction Co., Archt.-Contr., both 3905 Utah St.

Okla., Oklahoma City—S. W. Newby erect \$33,000, fireproof, 12-apartment, 900 W. 12th St.; W. R. Lowe, Contr., 937 East 11th St.

Tenn., Murfreesboro—Thomas H. Crichtlow and Lex N. Yearwood, who comprise firm of Crichtlow-Yearwood Co., Gen. Contrs., and George D. Waller, Archt., Independent Bldg., Nashville, plan to organize stock company and erect \$75,000, 2-story and basement, brick, 12-apartment on E. Main St.; hardwood floors.

Tex., Houston—Riverview Inn, Inc., J. E. Crain, Pres., Marine Bank Bldg., let contract to H. S. Jopling for \$45,000, 2-story, frame and stucco, Swiss type building near Lynchburg-Crosby Road, 20 mi. from Houston, overlooking San Jacinto River; Charles P. Jones & Co., Archts., Binz Bldg.

Tex., Houston—Lightfoot Construction Co., 3103 Main St., has contract to erect eight 6-apartments in 8006 block Myrtle St.; work started.

Tex., Houston—A. Jong, Contr., erecting \$20,000, 2-story, brick veneer, 12-apartment, 1600 block Danville St. in Castle Court.

### Miscellaneous

Mo., Joplin—Mrs. Wilhelmina Maxwell, Christian Bldg., expend \$35,000 for reconstructing 3-story, 50x114 ft. building, Sixth and Joplin Sts., for Mrs. Maxwell's cafeteria, bakery and tea room and John Taylor's candy making department; brick or tile; W. R. McCormick Construction Co., Contr., Joplin Natl. Bank Bldg.; T. E. Martinie, Archt., 420 N. Wall St.

Mo., St. Louis—Horeal Real Estate & Building Co., Pierce Bldg., erect \$10,000 addition to 1-story, 22x70 ft., brick restaurant and tenement, 2011-15 E. Grand Ave.; owner, Archt.-Bldr.

Okla., Tulsa—John J. Harden, Inc., 2701 N. 19th St., Oklahoma City, let contract at \$165,000 to Manhattan Construction Co., Court Arcade Bldg., Tulsa, for 1-story, 100 x250 ft., brick, tile and rein. conc., Municipal Market, 11th and S. Elgin Sts.; B. J. Noffsger, Archt., 2732 W. 19th St.; C. C. Hoffman, Engr., 1156 W. 56th St., both Oklahoma City. 2-27

Va., Hopewell—Tubize Artificial Silk Co. of America, 2 Park Ave., New York, erect extension to Recreation Hall; J. W. Atkinson & Co., Contrs., Lyric Bldg., Richmond. 3-6

### Railway Stations, Sheds, Etc.

Ga., Atlanta—Atlanta & West Point Ry., O. T. Nelson, Ch. Engr., let contract to A. K. Adams Co., 542 Plum St., N. W., for conc. platform and retaining wall and macadam driveway, Butler and Hunter Sts.; 322x32 ft., comp. roof, struc. steel columns, copper roofing work. 3-13

N. C., Hamlet—Seaboard Air Line Ry., W. D. Faucett, Ch. Engr., Savannah, Ga., let contract to York Construction Co., Odd Fellows Bldg., Raleigh, for transfer shed and freight depot; \$35,000. 2-13

Va., Portsmouth—Pennsylvania R. R., T. J. Skillman, Ch. Engr., Philadelphia, Pa., erecting \$35,000, 1-story, 32x840 ft., frame loading platform, inclosed; wood floors, paper roof, C. C. Pierce, Contr., Law Bldg., Norfolk; W. R. Parvin, Div. Engr., Cape Charles, Va. 2-27

### Schools

Ala., Auburn—Alabama Polytechnic Institute, Dr. Bradford Knapp, Pres., let contract at \$752,200 to W. L. Coston, Bessemer, for four buildings—shop buildings, 1 and 2 stories and basement, 250x50 ft.; administration building, 2 stories and basement, 233x49 ft.; auditorium, 1 story and basement, 144x132 ft.; textile building, 2 stories and basement, 300x60 ft.; rein. conc., struc. steel, brick and tile; tile, terrazzo and conc. floors; Warren, Knight & Davis, Archts., Protective Life Bldg.; Birmingham. 2-20

Ala., Birmingham—Following sub-contracts awarded on first unit of \$750,000 West End High School, under construction, for which Smallman Construction Co., Inc., 1109-15 S. 5th Ave., has general contract at \$139,831; Milwork, Estes Lumber Co., 1631 Vanderbilt Road; marble, Alabama Marble Co., Watts Bldg.; terrazzo, American Venetian Tile Co., Martin Bldg.; face brick, Birmingham Clay Products Co., Woodward Bldg.; common brick, slag and sand, Birmingham Slag Co., Comer Bldg.; rein. steel, Birmingham Fabri-

cating Co., 2015 N. 35th St.; misc. iron, Ingalls Iron Works; roofing, Mann & Nuss Co., 2313 5th Ave., S.; plastering, R. A. McLeod Plastering Co., 1402 N. 17th St.; mastic tile floors, Nagel Sales & Engineering Co., 517 22nd St.; linoleum, The Pizitz Dry Goods Co., 1821 2nd Ave., N.; glass and glazing, Pittsburgh Plate Glass Co., 2901 2nd Ave., N.; hardware, Wimberly & Thomas, 2011 1st Ave., N.; ash hoists, J. O. Burks, Martin Bldg.; metal doors, B. & O. Building Products Co., 2302 4th Ave., N.; hollow tile, Stephenson Brick Co., 2027 4th Ave., N.; and Vulcan Tile Co., 2103 1st Ave., N.; all Birmingham; waterproofing, Western Waterproothing Co., 1604 Syndicate Trust Bldg., St. Louis, Mo.; painting, Wm. Wilson Co., Bona Allen Bldg., Atlanta, Ga.; Warren, Knight & Davis, Archts., Protective Life Bldg., Birmingham. 1-9

Ga., Augusta—Mt. St. Josephs Academy erect 2-story and basement, 95x42 ft., hollow tile and stucco auditorium and chapel; steam heat, oak floors, built-up roof; Clausen-Lawrence Construction Co., Contr., 1394 Gwinnet St.

Ga., Forsyth—Bd. of Education, Dr. T. D. Thurmond, Sec., let contract at \$51,500 to Daniel Lumber Co., LaGrange, for 1-story and basement, 259x100 ft., brick, 16-classroom and auditorium high school; comp. roof, stone trim; Wm. J. J. Chase, Archt., 140 Peachtree St., N. E., Atlanta. 3-6

Ga., Gainesville—Gainesville Cotton Mills, Victor Montgomery, Gen. Mgr., erect \$50,000 gymnasium addition to school; also \$20,000 clinic adjoining school; brick, stone trim, comp. roof, private plans; probably build by day labor.

La., Baton Rouge—Zeta Zeta Alumni Assn. of Delta Kappa Epsilon, John B. Smullin, Sec., Louisiana State University, let contract at \$26,400 to L. W. Eaton, 1601 N. Boulevard, for 2-story, 86x37 ft., rein. conc., brick, stucco, east trim D. K. E. Fraternity building; comp. roof, tile floors; Wagan & Bernard, Archts., Canal Bk. Bldg., New Orleans, and Baton Rouge. 3-13

La., Bogalusa—City, K. I. Bean, Clk., let contract to Cowgill & LeBlanc for following school improvements: Two-story, brick, 12-classroom grammar school unit at high school, 2-story brick and frame W. H. Sullivan Memorial Manual training school unit to high school; heating plant additions and alterations to high school; 1-story, brick, 6-classroom unit and auditorium at Central School: \$82,000; Rathbone DeBuys, Archt., Hibernia Bk. Bldg., New Orleans. 3-13

La., Elton—Jefferson Davis Parish School Bd., Jennings, let contract at \$67,700 to E. E. Rabalais & Son, Bunkie, for alterations and additions to 2-story, brick high school, one-story, rein. conc., brick, stone trim, 8-classroom elementary school and auditorium, shower and heating room building; Wm. T. Nolan, Archt., Canal Bk. Bldg., New Orleans. 2-27

La., Franklinton—Washington Parish School Bd., D. A. Springfield, Sec., let contract at \$92,000 to G. L. Whitaker & Sons, Tylertown, Miss., for 2-story, 154x160 ft., rein. conc., brick high trim high school; 14-classrooms, built-up comp. roof; Herman J. Duncan, Archt., 120 Murray St., Alexandria. 3-20

La., Ringgold—Bienville Parish School Bd., E. H. Fisher, Supt., Arcadia, let contract at \$77,000 to A. G. Simms, Lake Village, Ark., for 2-story, brick and rein. conc., stone trim high school; built-up comp. roof; J. W. Smith & Associates, Archts., Ouachita Natl. Bk. Bldg., Monroe. 3-13

Md., Laurel—District Comms., Hon. P. L. Dougherty, Engr. Dept., Room 427 District Bldg., Washington, D. C., let contracts at \$86,989 and \$22,467 to Lee T. Turner, 1366 Perry Place, N. W., Washington, for employees' building and superintendent's residence at District Training School near Laurel; both 2 stories, brick and tile, slate roofs; A. L. Harris, Municipal Archt. Dist. Bldg., Washington. 3-20

Md., Upper Marlboro—Prince George's County Bd. of Education, Nicholas Orem, Supt., let contracts for following schools: A. C. Warthen, 2819 McGill Terrace N. W., Washington, at \$81,500 for 13-room and auditorium high school at Mount Rainier and at \$42,400 for Decatur Heights Jr. High School; J. T. Taylor Co., District Natl. Bank Bldg., Washington, at \$54,384 for 8-room and auditorium elementary school at Bradbury Heights; Thomas Hicks & Sons, 106 W. Madison St., Baltimore, at \$37,290 for Riverdale Elementary School; rejected bids and call for new bids on addition to Cheverly School; Upman & Adams, Archts., Woodward Bldg., Washington. 2-20

Miss., Heidelberg—Heidelberg Consolidated School Dist., I. M. McCormick, let contract

at \$26,182 to W. T. Breland, New Augusta, for rein. conc., brick, stone trim high school; P. J. Krouse, Archt., M. & W. Bldg., Meridian. 2-27

Miss., Tougaloo—Tougaloo College, Dr. Wm. T. Holmes, Pres., let contract at \$62,200 to Beckelheimer & Small, Hattiesburg, for 2-story, brick and rein. conc. dormitory; Hull & Malvaney, Archts., Lamar Bldg., Jackson. 3-20

Tenn., Dayton—Wilson-Weesner-Wilkinson Co., 202 W. Morelia Ave., Knoxville, has contract for rein. steel for \$80,000, 3-story and basement, 60x442 ft., rein. conc., cut stone trim, native sand stone administration building for Bryan Memorial University for which V. L. Nicholson Co., Box 661, Knoxville, has general contract; work to start about April 1; total cost of buildings about \$350,000. 3-13

Tenn., Memphis—Bd. of Education, S. J. Prescott, Pres., let contract at \$107,733 to H. A. McGuire for 2-story, brick and stone, 182x100 ft., 16-classroom grammar school, Valentine Ave. and Evergreen St.; tile roof; Joe T. Wallace, Archt., Bd. of Commerce Bldg.; wiring, \$2,630, Thompson Electric Co., 63 S. 3rd St.; plumbing and heating, \$8550, Fisher Heating & Plumbing Co., 625 Greenlaw Bldg. 3-13

Tex., Commerce—East State Teachers' College erect \$200,000, 3-story, 168x90 ft., rein. conc., fireproof library; contain 10 classrooms; Wohlfeld & Co., Contrs., Construction Industries Bldg., Dallas; W. E. Ketchum, Archt., Pope Bldg., Austin.

Tex., Crockett—Crockett Ind. School Dist., I. J. Deck, Supt., let contract at \$99,400 to Wentzel & Wood, Sherman, for 2-story, brick, rein. conc., fireproof, 13-room and auditorium high school; Arthur E. Thomas, Archt., Construction Bldg., Dallas; electric wiring, Superior Electric Co., 409 S. Ervay St., Dallas; plumbing and heating, E. J. Teller & Son, Henderson. 3-13

Tex., Eden—Eden Ind. Dist. Bd. of Education, T. B. Drinkard, Pres., let contract at \$44,975 to Worth Building and Investment Co., Big Spring, and W. T. Waggoner Bldg., Fort Worth, for 1-story, brick, tile and rein. conc., 12-room and auditorium high school; conc., terrazzo and wood floors; Peters, Strange & Bradshaw, Archts., Petroleum Bldg., Big Spring. 3-13

Tex., Lubbock—Young & Pratt, Lubbock, have plumbing and heating contract at \$65,000 and Electric Construction Co., 209 S. Pearl St., Dallas, wiring contract at \$23,670 for \$650,000 Sr. High School for which D. N. Leaverton, Myrick Bldg., Lubbock, has general contract at \$463,870; plans by Peters Strange & Bradshaw, Myrick Bldg., Lubbock, call for 2 and 3-story, 274-202 ft. structure, brick, tile and rein. conc., stone trim, conc., tile terrazzo and wood floors. 3-20

Va., Williamsburg—College of William and Mary, Dr. J. A. Chandler, Pres., let contract at \$69,000 to J. W. Davis, 410 Duke St., Newport News, for 2½-story, 135x60 ft., brick and conc. infirmary; linoleum floors, slate roof; Chas. M. Robinson, Inc., Archt., Times-Dispatch Bldg., Richmond. 3-6

W. Va., Fairmont—State Bd. of Control, Jas. S. Lakin, Pres., Charleston, let contract at \$159,400 to Green & Stowe, Welch, for 3-story, 61x205 ft., brick, limestone trim, fireproof science building at Fairmont State Normal School; heating and plumbing, \$24,565, Meyers Brothers, 219 Hale St., Charleston; electric, \$5985, Home Electric Co., Morgantown; R. A. Gillis, Archt., Fleming Bldg., Fairmont. 2-13

W. Va., Weston—Bd. of Education let contract at \$44,138 to L. A. & Leonard Riley, Shinnston, for 3-story, 120x35 ft., frame school; fireproof corridors, wood floors; Edw. J. Wood & Son, Archts., Lowndes Bldg., Clarksburg. 2-20

### Stores

D. C., Washington—Hechinger Co., Inc., 6th and C Sts., S. W., erecting brick building, 15th and H Sts., N. E.; 3000 ft. floor space, adjoining main building will be loading platform 20x100 ft., and 2 lumber sheds 40x100 and 72x200 ft.; Louis T. Rouleau, Archt., Investment Bldg.

La., Goodhope—Goodhope Realty Co., Hugo Epstein, let contract at \$18,000 to R. P. Farnsworth & Co., Maritime Bldg., New Orleans, for 1-story, stone, tile and brick store, Georgia Ave., and Maxey Place; comp. and tile roof; J. W. Billingsley, Const. Engr., Interstate Bk. Bldg., New Orleans. 3-13

La., New Orleans—A. J. Monjure, 4317 S. Claiborne St., erecting store, 4321 S. Clai-

bourne Ave.; J. B. Riley, Contr., 4636 S. Miro St., ready for sub-bids on built-up roofing and plumbing.

Mo., Springfield—Earl Hawkins, McDaniel Bldg., let contract to J. A. Thompson, 851 S. Broadway, for \$25,000, 1-story, brick store and garage, Elm and Jefferson Sts. 3-20

Tenn., Bristol—Anson King erecting \$90,000, 2-story building on State St. between 6th and 7th Sts.; to be leased as department store to Carp & Co., 1709 Washington St., St. Louis, Mo.; 50x150 ft., steel and frame, wood and conc. floors, comp. roof; Harry McDonald, Contr., E. Windsor Ave., Bristol, Tenn.; C. B. Kearnott, Archt., Bristol, Va.

Tenn., Nashville—Kilby Car & Foundry Co., Anniston, Ala., has contract for rein. steel and Deslauries Metal Co., 8841 Central St., Detroit, Mich., contract for metal forms for \$350,000, 4-story and basement, 75x175 ft., rein. conc., brick and tile, fireproof store for Caldwell & Co., 400 Union Ave.; Montgomery Ward & Co., Lessee, Chicago; Foster

& Creighton Co., Contrs., Fourth and First Bldg.; Marr & Holman, Archts., Stahlman Bldg. 2-27

Tex., Pharr—J. W. Standifer soon start work on brick store; 53x97 ft.; work to be in charge of O. C. Brown.

### Theaters

Ga., Monroe—R. L. Nowell, Jr., and Henry McD. Tichenor, let contract to Michael & Watson, Monroe, for \$50,000, 2-story and basement, rein. conc. and struc. steel, brick and tile theater; stone trim; Warfield & Keeble, Archts., Nashville Tr. Bldg., Nashville, Tenn. See Want Section—Building Material and Equipment.

### Warehouses

Ga., Atlanta—Johnson-Fluker Co., 5 Haynes St., S. W., let contract to A. K. Adams Co., 542 Plum St., N. W., for \$125,000, 3-story and basement, 125x175 ft., struc. steel

warehouse and store, 548 Glenn St., S. E.; maple and pine floors, tar and gravel roof; McDonald & Co., Archts-Engrs., Southeastern Trust Bldg. 3-8

Okla., Oklahoma City—Oklahoma Warehouse Co., Errett Newby, W. S. Sanger and associates, Braniff Bldg., soon start work, day labor, on \$500,000, 4-story, 100x210 ft., rein. conc., brick bonded terminal warehouse, Walnut St.; 210,000 sq. ft. storage space in addition to exhibit rooms and brokerage offices; G. C. Reid, Archt., Oklahoma Savings & Loan Bldg. 3-13

Tenn., Memphis—Memphis Bottlers Supply Co., E. J. Koller, Mgr., 137 Calhoun Ave., erect \$16,000, fireproof warehouse, 97 Iowa Ave.; 10,000 sq. ft. floor space; F. J. Ozanne, Contr., Empire Bldg.; Joe T. Wallace, Archt., Bank of Commerce Bldg.

Tex., San Benito—Jack Ogden let contract to McMillan Construction Co. for \$15,000, 50x140 ft. warehouse and office to be leased to Reuter Seed Co.

## WANT SECTION

### THE CLASSIFICATIONS IN THIS SECTION ARE:

#### Machinery and Supplies

Under this heading are reported requests for data, prices and literature and information on machinery, supplies and miscellaneous materials of a wide variety.

*Items in this department are published without charge and these columns are open for the publication of wants of all kinds relating to construction work, machinery, materials and supplies.*

#### Building Materials and Equipment

This division comprises all classes and kinds of materials and equipment used in building and construction projects of every kind.

#### Bids Asked

Includes bids asked by U. S. Government, States, districts, municipalities, firms and individuals for machinery, materials, supplies and construction work.

- (2) Generating Unit—a. c., approx. 100 to 150 kv-a., 3 phase, 220 or 440 volts preferred
- (3) Keyseater
- (4) Paint Grinding Mill—small, 16 to 20-in. steel mill preferred
- (5) Welding Machine.

#### Miscellaneous

Kegs and Barrels.—Powell Florida Vinegar Corp., 27th Ave. and 27th Lane, S. W., Miami, Fla.—Wants prices and data on gum wood and fir paraffined kegs and barrels.

Metal Work (Stamped Steel).—Brunswick Seating Works, Inc., Lawrenceville, Va.—Wants prices and data from manufacturers on considerable amount of stamped steel metal work in gauges from 16 to 20 for use in portable assembly seats; year's requirements.

Rug Cleaning Machinery.—Star Laundry, 121 Bay St., West, Savannah, Ga.—Wants prices and data on rug cleaning machinery.

Spraying Machines, etc. for Nursery.—Palestine Nursery, B. H. Gardner, Gardner Bldg., Palestine, Tex.—Wants spraying machines and movable apparatus for watering pecan trees.

Florida Fruit & Produce Co., 416-420 W. Bay St., Jacksonville, Fla., engaged in wholesale fruit and produce business, plans erecting large terminal cold-storage building—Wants to correspond with firms doing this type of construction work and furnishing equipment.

#### Building Material and Equipment

Eccles D. Everhart, Archt., High Point, N. C., wants prices on following for \$30,000 dwelling:

- Electric Refrigerators
- Flooring—hardwood, linoleum, tile
- Incinerator
- Limestone
- Marble
- Roofing—slate
- Tile—hollow.

Hart & Stone, Archts., Hitchcock Bldg., Nashville, Tenn., want prices on following for \$31,000 dwelling:

- Flooring—hardwood, tile
- Limestone
- Marble
- Roofing (hip)—built-up, tile
- Tile—hollow.

Hawk & Parr, Archts., 1019 Hales Bldg., Oklahoma City, Okla., want prices on following for \$15,500 church, Sayre, Okla.:

#### Cast Stone

International Steel & Iron Co., Inc., Evansville, Ind., wants prices on following:

- Mail Chutes
- Marble
- Metal Doors
- Ventilators.

Jacob E. Salie, Archt., Empire Bldg., Birmingham, Ala., wants prices on following for dwelling:

- Flooring—hardwood, tile
- Roofing—asbestos shingle
- Tile—hollow.

John R. Rogers, Contr., Market Street Post Office Bldg., Smithfield, N. C., wants prices on following for \$65,000 Nurses Home and hospital annex, Goldsboro (N. C.) Hospital:

- Dumb Waiters
- Flooring—tile composition
- Incinerator
- Limestone
- Marble
- Metal Doors
- Steel Buckts and Trim
- Vault Doors

J. R. Pryor, Treas., Mayfield Hospital, Inc., Sixth and North Sts., Mayfield, Ky., wants prices on following for \$18,000, 2-story and basement addition.

- Dumb Waiters
- Electric Refrigerators
- Elevators
- Flooring—linoleum, tile
- Roofing—asbestos shingle
- Sprinklers.

Samuel H. Baker & Co., Inc., Box 289, Richmond, Va., wants prices on following for 10 dwellings at Chevy Chase, D. C.:

- Brick (face)
- Electrical Fixtures
- Metal Sash.

W. F. Turman, Prin., Horn Lake Consolidated School, Horn Lake, Miss., wants prices on following for \$42,500 high school:

- Flooring—tile
- Roofing—asbestos.

Algernon Blair, Contr., Montgomery, Ala., wants prices on following for 41 sets of officers' quarters, Fort Benning, Ga.:

- Cast Stone
- Flooring—hardwood, tile
- Limestone
- Roofing—tile.

Fredk. F. Beall, Archt., 334 St. Paul St., Baltimore, Md., wants prices on following for dwellings:

- Roofing—built-up, slate.

W. M. Smith & Co., Birmingham, Ala.—Wants prices and data on:

- I Beams—1200 lin. ft., 18-inch.

Warfield & Keeble, Archts., Nashville Trust Bldg., Nashville, Tenn., want prices on following for \$50,000 moving picture theater for Robt. L. Nowell, Jr., and Henry McD. Tichenor, Monroe, Ga.:

- Cast Stone
- Flooring—hardwood, linoleum, composition
- Metal Doors
- Roofing—built-up
- Tile—hollow.

#### Machinery and Supplies

Baling Press (Electric).—W. M. Kitchen, P. O. Box 1844, Atlanta, Ga.—Wants prices and data on good used electric baling press for waste paper, with 220-volt, 60-cycle, 3-phase motor.

Ditcher.—Ed. P. Phillips Machinery Co., Ninth and Cary St., Richmond, Va.—Wants prices and data on ditcher, either Parson, Austin or Barber Greene; to cut 10 ft. deep, 30 in. wide.

Dry Kiln Equipment.—C. M. Gooch Hardwood Co., P. O. Box 272, Vicksburg, Miss.—Wants prices and data on dry kiln equipment, including piping, etc.

Glue and Sand-Paper Manufacturing Equipment.—James I. Davis, Box 497, Rome, Ga.—Wants prices and data on machinery and equipment for manufacturing glue and sand-paper.

Hoisting Outfit (Gasoline).—Todd Co., Inc. (Mchv. Dealer), 417-421 Union St., Norfolk, Va.—Wants prices and data on double drum used gasoline hoisting outfit, with 2000 lb. capacity, single line.

Shovel Attachment.—Everglades Construction Corp., Hialeah, Fla.—Wants prices and data on complete Bucyrus shovel attachment to fit Model 50-B (serial number 23390 Diesel machine).

Tank and Tower.—Paul Noe, City Clk., Seminole, Okla.—Wants prices and data on 120,000 to 300,000 gal. water tank and tower; 90 ft. or 125 ft. high; requests quotation by wire.

Tractor Guide Parts.—T. B. Carter, Plainview, Tex., preparing to manufacture tractor guides—Wants prices and data on following in lots of 100, 200, 500 and 1000: Wheel, 1 piece pressed steel 17 in. diam., as used on 2-row listed corn cultivators, to receive boxing for journal 1 1/2 in. diam. and 2 collars with set screws; disc, 12 in. diam., with box, felt dust washer and spring, etc., as used to secure to bar, as used on ordinary wheat drill; electric switch, with pull lever to interpose in ignition circuit of tractor to short the ignition; pull spring about 1x24 in.; pull spring about 1/2x6 in.; pull spring about 5/8x16 in.; 2 small wheels as used on children's wagons, about 8 in.; round mild steel, 1 1/2 in., in 1000 lb. lots; mild steel bars, 1/2x2 in., 1000 lb. lots.

Edward W. Peters (Mchv. Dealer), Danville, Pa.—Wants prices and data on following:

- (1) Marine Engines (Diesel)—standard make, for which repair parts may be purchased
- (2) Turbo - generator Units—several, with water wheel to work on 8-ft. head (no more), approx. 600 h. p.

W. M. Smith & Co. (Mchv. Dealer), Birmingham, Ala.—Wants prices and data on following:

- (1) Derrick—stiff leg, 80 to 100 ft.

## Bids Asked

**Airway Lighting.**—Office of E. W. Libbey, Ch. Clk., Div. of Supplies, Washington, D. C.—Bids Apr. 11 for constructing Kingsville-Houston, Tex., section of Brownsville-Houston, Tex. Airway, consisting of revolving beacons and boundary lighting systems. See Construction News Columns—Airports, Airplane Plants, etc.

**Bridge Superstructure.**—Parkton, Md. See Construction News—Bridges, Culverts, Viasducts.

**Bridges.**—State of Tennessee. Bids for 12 bridges. See Construction News—Roads, Streets, Paving.

**Building Supplies.**—Contracting Officer, Q. M. Corps, Fort Benning, Ga.—Bids Mar. 31 for heating boilers, 438 bbl. cement, 210 squares saturated rag felt, panel doors, 11 pairs butt hinges, 2 pair jamb hinges, 2 tons plaster, 408 pieces iron sheeting, 200 lb. roofing nails and 14,000 bd. ft. cypress lumber.

**Cafeteria Equipment.**—Supervising Archt., Treasury Dept., Washington, D. C.—Bids Apr. 14 for furnishing and installing cafeteria equipment in U. S. Internal Revenue Bldg., Washington.

**Check Paper, Postage Stamp Paper, etc.**—Treasury Dept., Bureau of Engraving and Printing, Washington, D. C.—Bids May 1 for check paper, postage stamp paper and internal revenue paper, during fiscal year beginning July 1, 1930; contracts will be made only with actual manufacturers for postage stamp and internal revenue paper.

**Crane (Traveling).**—Bd. of County Commrs. of Duval County, Frank Brown, Clk., Jacksonville, Fla.—Bids Apr. 1 for 3-ton traveling crane for garage and shop at Duval County prison farm.

**Curb Stops and Roadway Valve Boxes.**—Bd. of Awards, Baltimore, Md.—Bids April 3 for furnishing and delivering curb stop and roadway valve boxes to Bureau of Water Supply; E. G. Rost, Water Engr.

**Dikes.**—U. S. Engr. Office, Postal Telegraph Bldg., Kansas City, Mo.—Bids Apr. 1 for constructing about 3340 lin. ft. standard pile clump dikes, Missouri River, Waverly Bend, 1 mi. from Waverly, Mo.

**Drainage Pumping Station.**—Bd. of Awards, Baltimore, Md.—Bids April 2 for building superstructure of Colgate drainage pumping station at Broening Highway and Pennsylvania R. R., Storm Water Contr. No. 139; work includes 1 story brick building, 28x23 ft., together with miscellaneous electrical work; plans, etc., from office of Milton J. Ruark, Sewerage Engr.

**Dredging.**—U. S. Engr. Office, Norfolk, Va.—Bids Apr. 8 for dredging approx. 281,855 cu. yd. sand and mud and removing 2170 cu. yd. rock in place in Appomattox River, Va.

**Dredging Pump (Double Suction).**—U. S. Engr. Office, McCall Bldg., Memphis, Tenn.—Bids Apr. 22 for 32-in. double suction dredging pump, for Dredge Zeta.

**Drilling (Unbleached).**—Marine Corps, Q. M. Dept., Washington, D. C.—Bids Apr. 9 for 50,000 yd. unbleached drilling, delivery Philadelphia, Pa.

**Drills.**—Bureau of Supplies and Accounts, Navy Dept., Washington, D. C.—Bids Apr. 1 for carbon steel twist drills.

**Fire Engine, Hook and Ladder Truck.**—City Comrs., Jacksonville, Fla.—Bids Apr. 14 for Fire Dept., triple combination pumping engine, pumping capacity of 1000 gal. minute at 120 lb. pump pressure, equipped with 100-gal. booster tank, hose, extinguishers, etc.; aerial hook and ladder with extension ladders, etc.

**Fire Hose, Cable and Wire.**—Bd. of Awards, Office of City Register, City Hall, Baltimore, Md.—Bids April 2 for fire hose, cable and wire for Fire Dept.

**Fuel Oil.**—Quartermaster, Ft. Hoyle, Md.—Bids Apr. 15 for 14,000 gal. fuel oil.

**Fence Posts, etc.**—Div. of Supplies, Dept. of Commerce, Washington, D. C.—Bids Apr. 4 for 6600 steel fence posts and 6600 steel galvanized triangles.

**Generator Set.**—See Sewerage Pumping Station and Equipment.

**Hangar.**—R. W. B. Hart, City Mgr., Municipal Bldg., Lynchburg, Va.—Bids Mar. 29 for complete hangar at municipal airport. See Construction News Columns—Airports, Airplanes plants, etc.

**Kitchen Equipment.**—Marine Corps, Q. M. Dept., Washington, D. C.—Bids April 11 for kitchen equipment, delivery Philadelphia, Pa.

**Lumber (California Redwood).**—Panama Canal, Office of Gen. Pur. Officer, Washington, D. C.—Bids Apr. 3 for California redwood lumber, Sch. 2543.

**Lumber.**—Bd. of Supervisors of Tate County, Senatobia, Miss.—Bids Apr. 7 for lumber to be furnished to county for year 1930.

**Manganese Bronze Rods.**—Panama Canal, Office of Gen. Pur. Officer, Washington, D. C.—Bids Mar. 31 for manganese bronze rods, Sch. 2546.

**Medical Supplies, etc.**—Commr. of Indian Affairs, 806 Spruce St., St. Louis, Mo.—Bids Apr. 22 for medical supplies, instruments, etc., as required during fiscal year 1931, including drugs, chemicals, medicines, binders board, leather bags, bougies, catheters, curatives, forceps, knives, needles, scissors, syringe, cotton, gauze, etc.

**Miscellaneous.**—Panama Canal, Office of Gen. Pur. Officer, Washington, D. C.—Bids Apr. 9 for following, Sch. 2545:

Four garbage trucks, dump body, 2-ton; 2 electric ranges, 500 flashlights, 200 resistance units, 100,000 ft. lamp cord, pipe fittings, etc.

**Miscellaneous.**—Panama Canal, Office of Gen. Pur. Officer, Washington, D. C.—Bids Apr. 11 for following, Sch. 2547:

Wrought-iron pipe, valves, and pipe fittings (Pipe, and some of valves and fittings being grooved for "Vicatule" couplings).

**Motor Ambulances.**—Marine Corps, Q. M. Dept., Washington, D. C.—Bids April 3 for 8 motor ambulances, delivery Philadelphia, Pa.

**Paint, etc.**—Marine Corps, Q. M. Dept., Washington, D. C.—Bids April 12 for paint, etc., delivery Philadelphia, Pa.

**Pipe (Cast Iron).**—See Settling Tanks.

**Pipe (Vitrified Clay).**—See Sewer Construction.

**Pipe (Cement).**—See Sewer Construction.

**Pump (Fire Engine).**—Charles E. Gross, County Auditor, Dallas, Tex.—Bids April 17 for 750-gal. capacity fire engine pump.

**Pumps.**—See Sewerage Pumping Station and Equipment.

**Pumping Plant, etc.**—Supervising Archt., Treasury Dept., Washington, D. C.—Bids Apr. 16 for furnishing and installing wells, pumping plant, etc., at U. S. quarantine station, Charleston, S. C.

**Reinforcing Bars.**—See Settling Tanks.

**Refrigerators.**—Q. M. Supply Officer, Washington, D. C.—Bids Apr. 9 for 165 electric refrigerators.

**Road.**—Dallas, Tex. See Construction News—Roads, Streets, Paving.

**Roads.**—State Highway Dept., Dover, Del.—Bids April 15 for 6 roads: Cont. 145—widens 18.9 mi. Selbyville-Georgetown Highway, 23,000 cu. yd. excavation and borrow, 11,300 cu. yd. cement cone, pavement, 2,800 tons amiesite asphalt surface course, 1,000 tons waterbound macad. surface course, 20,000 lb. reinforcement, 8,000 lin. ft. wood shoulder curb; Cont. 147—1.50 mi. Newark-Maryland line, 9,400 cu. yd. excavation and borrow, 3,350 cu. yd. cement cone, pavement, 17,000 lb. reinforcement; Cont. 149—5.12 mi. Middletown-Mt. Pleasant and Frogtown Crossing Cutoff, 30,000 cu. yd. excavation and borrow, 6,500 cu. yd. cement cone, pavement, 4,200 tons amiesite asphalt surface course, 9,500 lb. reinforcement, 3,500 lin. ft. wood shoulder curb; Cont. 151—4.791 mi. County Farm-Shortly, 18,500 cu. yd. excavation and borrow, 4,900 cu. yd. cement cone, pavement, 11,000 lb. reinforcement, 4,000 lin. ft. wood shoulder curb; Cont. 154—5.40 mi. Clayton-Delaney road, 23,000 cu. yd. excavation and borrow, 6,250 cu. yd. cement cone, pavement, 8,500 lb. reinforcement, 3,000 lin. ft. wood shoulder curb; Cont. 161—1/2 mi. Planting-Dual Highway, St. Georges to State road.

**Roads.**—State of Louisiana. Bids for 6 roads. See Construction News—Roads, Streets, Paving.

**Roads.**—Charleston, W. Va. Bids for 5 roads. See Construction News—Roads, Streets, Paving.

**Roads.**—Clayton, Mo. Bids for 2 roads. Roads, Streets, Paving.

**Roads.**—State of Maryland. Bids for 3 roads. See Construction News—Roads, Streets, Paving.

**Roads.**—Towson, Md. Bids for 3 roads. See Construction News—Roads, Streets, Paving.

**Roads.**—State of Tennessee. Bids for 5 roads. See Construction News—Roads, Streets, Paving.

**Saws.**—Marine Corps, Q. M. Dept., Washington, D. C.—Bids Apr. 4 for saws, delivery Quantico, Va.

**Settling Tanks.**—Bd. of Awards, Baltimore, Md.—Bids April 2 for settling tanks Nos. 1 and 2 at Back River Sewage Treatment Works; Sanitary Contract No. 263; work includes, 58,500 cu. yds. excavation; 50,000 cu. yds. rolled embankment; 6300 cu. yds. Class A, B, C and D conc. masonry; 748,000 lbs. rein. bars; 2 sewage traction-Clarifier mechanism; 25 tons c. l. pipe; 49,000 lbs. struc. steel; Milton J. Ruark, Sewerage Engr.

**Sewers and Disposal Plant.**—City of Pasadena, Tex., J. C. Thomas, Sec.—Bids April 10 for sanitary sewers, disposal plant and water works; plans etc. at office of city engineer, Second National Bank Bldg., Houston.

**Sewer Construction.**—City of Laurel, Miss., Paul C. Klyce, City Engr.—Bids March 31 for sanitary sewer; 1770 ft. of 12-in., 4350 ft. of 15-in., 3010 ft. of 18-in., and 2540 ft. of 21-in. and 1130 ft. of 24-in., vit. clay and machine made cement pipe.

**Sewerage Pumping Station and Equipment.**—Sewerage and Water Bd., New Orleans, La., A. G. Moffat, Sec., 526 Carondelet St.—Bids May 21 for following: Cont. 107-D, two 110-in. screw pumps for drainage station No. 9; Cont. 114-D, extension to drainage pumping station No. 3; Cont. 115-D, trunk type switchboards, motor generator, transformers and accessories for drainage station No. 2; and for furnishing insulated wire and cable for sewerage station No. 17.

**Sheeting (Cotton).**—Marine Corps, Q. M. Dept., Washington, D. C.—Bids Apr. 10 for 50,000 yd. cotton sheeting (unbleached), delivery Philadelphia, Pa.

**Shoes (Baseball).**—Marine Corps, Q. M. Dept., Washington, D. C.—Bids Apr. 4 for 340 pairs baseball shoes, delivery Philadelphia, Pa.

**Switchboards.**—See Sewerage Pumping Station and Equipment.

**Target Carriers (Steel).**—Marine Corps, Q. M. Dept., Washington, D. C.—Bids April 4 for 18 steel target carriers, delivery Parris Island (Port Royal), S. C.

**Traction-Clarifier Mechanism.**—See Settling Tanks.

**Trailer.**—State Highway Dept., Dover, Del.—Bids April 15 for 1 heavy duty trailer.

**Structural Steel.**—See Settling Tanks.

**Water Works.**—See Sewers and Disposal Plant.

**Wire and Cable.**—See Sewerage Pumping Station and Equipment.

## Trade Literature

**Cement Uses.**—Alpha Aids, No. 61, a booklet published at intervals by the Alpha Portland Cement Co., Easton, Pa., and Chicago, Ill., in the interest of buyers, users and sellers of Portland cement, has recently been issued. The publication presents on its front cover page an airplane view of the municipal airport at St. Louis, Mo., a feature of which is a concrete apron 200 by 2000 feet.

**Steel Tanks.**—The Lancaster Iron Works Co., Inc., Lancaster, Pa., has issued a handbook on steel tanks containing specifications of standard sizes and capacities, fire protection and insurance requirements for the storage and use of volatile liquids, specifications of steels for various purposes, and useful information and data in connection with tank design and installation.

**Steel Windows.**—The Crescent Steel Company, St. Louis, Mo., has issued a new booklet illustrating and describing the design, construction and uses of Crescent steel windows of various types, including pivoted, underwriters, projected, continuous, casement and basement windows, mechanical operators and steel doors.

**Railroad Data.**—The Railroad Data Book for 1929 has been issued by the Committee on Public Relations of the Eastern Railroads, New York. The publication contains a total of 104 pages, with tables and figures, illustrations and other data relating to 1929 activities of the railroads. Information is derived chiefly from official reports of the Interstate Commerce Commission, American Railway Association and studies by the Bureau of Railway Economics.

**Ingot Iron Pipe.**—Literature recently issued by the American Rolling Mill Company, Middletown, Ohio, includes a booklet telling why Armeo ingot iron pipe gives long service and presenting information and engineering data on pipe line systems. The company has also issued folders containing articles by Russell C. Beam, development engineer, on "Riveted Design Applied in Welded Pipe Line Construction" and on "Plate Pipe Materials."

**Roller Chain Drive Sprockets.**—A 44-page booklet devoted to sprockets for roller chain drives has been published by the Diamond Chain and Manufacturing Company, Indianapolis, in which standard types of sprockets, including plate, integral-hub and detachable-hub, are described and illustrated. Complete mechanical specifications are presented for single and multiple-strand chains, for drives rated up to 672 horsepower.

**Weighing Accuracy.**—The Exact Weight Scale Company, Columbus, Ohio, has issued a portfolio of literature illustrating and describing Exact Weight weighing equipment, including laboratory, industrial, bakery, sacking and textile equipment. The portfolio carries a large number of illustrations showing various weighing units made by the company and presents details regarding their uses.

**Modern Motive Power.**—The George D. Whitcomb Co., Rochelle, Ill., builders of railroad and industrial locomotives 2 to 100 tons, is distributing folders illustrating and describing various units of the Whitcomb line, including an 80-ton oil electric switching locomotive, 40-ton gear drive switching locomotive and other units of gasoline and oil-electric drive.

**Weighing Freight.**—A booklet issued by the Norfolk & Western Railway Company refers briefly to early methods of weighing and outlines development of scales as now used for freight weighing. It emphasizes the importance of accuracy in weighing machines and notes that railroads require scales of many types and capacities ranging from one grain to 315,000 pounds.

**Pulverizing Mills.**—Bulletin 902 devoted to Fuller Lehigh pulverizing mills for rock products and other materials has been issued by the Fuller Lehigh Company, Fullerton, Pa., a Babcock & Wilcox organization. The publication tells in an interesting manner of the economic and mechanical advantages of these mills, which are of the air and screen separation types.

**Safety Ladder.**—The Dayton Safety Ladder Company, Dayton, Ohio, is distributing its newest catalogue and descriptive material regarding the Dayton safety ladder, which is light in weight and folds compactly for easy carrying. It is made in types A and B, the latter being of lighter construction.

**Steel Products.**—The David Lupton's Sons Company, Philadelphia, is distributing a booklet illustrating and describing Lupton steel products, including steel casements and operators, projected casements, architectural projected windows, double hung windows, residence casements and casement doors, basement windows, pivoted windows and operators, commercial projected windows, Pond roof design, Pond continuous windows and operators, industrial doors, airplane hangar doors, commercial doors, corrugated wire glass skylights and others. Lupton's commercial steel partitions are described also.

**Life Insurance.**—Lawrence F. Abbott has written a book which he styles "The Story of Nylic," a history of the origin and development of the New York Life Insurance Company from 1845 to 1929. While the publication is designed primarily for the New York Life organization, it has been the aim of the author to make it human and narrative rather than technical and statistical, presenting the story in such a manner as to enlist the attention of the general reader.

**Steel Service.**—The Macomber Steel Company, Canton, Ohio, has issued its revised catalogue No. 618 devoted to standardized service in steel for one-story buildings, such as hangars, terminals, gymnasiums, auditoriums, theatres, warehouses, factories, garages, etc. In supplying this service, the Macomber organization operates through district representatives in principal building centers working with engineers, architects and contractors.

**Partition Assemblies.**—A folder is being distributed by the Globe-Wernicke Co., Cincinnati, Ohio, illustrative and descriptive of partition assemblies manufactured by the company, whose products also include filing cabinets, filing supplies, visible record equipment, stationers' goods, desks and tables, steel shelving, steel and wood library equipment, sectional bookcases, office furniture and special steel equipment.

## INDUSTRIAL NEWS OF INTEREST

Items of news about industrial, railroad or financial interests, building operations, construction work, municipal improvements, or the sale of machinery or the letting of contracts in the South or Southwest, are invited from our readers, whether they are advertisers, or subscribers, or not. We invite information of this character from readers in the North and West about their Southern business operations, as well as from Southern readers. News of value will be published just as readily when from non-advertisers as from advertisers.

### Tractor Business Shows Increase.

Industrial expansion is reflected in the present status and future prospects of the tractor business, according to C. D. Fleming, vice president of the Cleveland Tractor Company, Cleveland, Ohio, manufacturers of Cletrac crawler tractors for farm and industrial use. Mr. Fleming states that the volume of domestic business of the company for February was 41 per cent ahead of the corresponding month last year.

### Opens Houston Office and Warehouse.

The American Asphalt Paint Company, Chicago, announces the opening of an office and warehouse in Houston, Tex., and a branch office at 393 Seventh avenue, New York. The company also has a branch office at 1 Montgomery Street, San Francisco, and a warehouse at Oakland, Cal. It has just put in production a new plant at Kankakee, Ill., to serve the Midwest trade and will devote its plant at Lincoln, N. J., to the Eastern and export trade.

**Waste in Industry.**—The Westinghouse Electric and Manufacturing Company, East Pittsburgh, Pa., has issued a new booklet, 1840-A, entitled "Stop Waste." It is published in the interest of a continuous campaign for elimination of waste in American industry, carried on in connection with a movement sponsored by the American Society of Mechanical Engineers with the cooperation of the American Management Association.

**Added Travel Comfort.**—Pullman lounge cars are now operated by the Southern Railway System between Chattanooga, Knoxville, Washington and New York on trains Nos. 41 and 42 of the Washington-Chattanooga-New Orleans express. A folder issued by the railway illustrates sections of the car, half of which is a lounge and the other half a modern sleeping coach. The folder also presents northbound and southbound schedules.

**Conveyor Systems.**—A bulletin No. 30-A, entitled "Overhead Conveyor Practice," devoted to an explanation of engineering procedure in laying out an overhead system, has been issued by the Anchor Steel & Engineering Company, Detroit, Mich. The publication deals with factors to be considered and avoided, selection of alignment, coefficients to use and the method of computing chain pull, presenting illustrations, diagrams and tables to augment information and to clarify the text.

**Celite in Concrete.**—As a practical and economical method of securing good concrete through the medium of dry, workable mixes, Celite is said to be extensively used. This product is a specially prepared grade of diatomaceous silica, a permanent element in concrete, and does not affect the time of setting, according to the manufacturer. It is produced by the Johns-Manville Corporation, New York, and is described in a booklet issued by the company, which also illustrates its application in construction work.

### New Gears and Forgings Plant.

The Ganschow Division of Gears and Forgings, Inc., has moved to 2108-20 North Natchez avenue, Chicago, Ill., where a modern plant provides approximately 30,000 square feet of floor space for manufacturing, and with exceptional shipping facilities. William Ganschow, vice president and manager of the Ganschow Division, will continue to direct its operations. To facilitate its service, the Chicago district sales office in charge of C. F. Goedke, will be located at the new plant. Main plant of Gears & Forgings, Inc., is at Cleveland, Ohio.

### Manager of Sales for Heltzel.

B. M. Clark, for several years assistant manager of sales of the Heltzel Steel Form and Iron Company, Warren, Ohio, has been appointed manager of sales to succeed W. J. Savage, recently resigned. The Heltzel company manufactures steel forms for concrete construction and steel plate fabricating.

**Diesel Electric Drive Tugs.**

Four more Diesel-electric tugboats are now to be added to the electric fleet operating in New York harbor. The Erie Railroad Company has ordered construction of these, their first electric boats, by Pusey & Jones Corporation, Wilmington, Del. Electric equipment for propelling the boats and operating the auxiliaries will be furnished by the General Electric Company. Power plant on each boat will consist of Ingersoll-Rand engines driving two main generators and two auxiliary generators. The first electrically operated tug boat to be used in the Boston harbor will be two now being built for the Mystic Steamship Company of Boston. Power for driving the General Electric equipment both for propulsion machines and auxiliaries will be supplied by Winton engines.

**United States Steel Report.**

The report of operations of the United States Steel Corporation, New York, and its subsidiary companies, for the fiscal year 1929, shows total earnings of \$265,838,932, after deducting expenses incident to operations, including ordinary repairs, allowance for employees' profit sharing fund, taxes and approximately \$107,000,000 for maintenance. The total net income for the year amounted to \$197,592,000, while the surplus net income was \$108,523,342, after deducting \$25,219,677 in dividends paid on 7 per cent preferred stock and \$63,849,040 in dividends paid on common stock.

**Bank Celebrates Founding Dates.**

The Bank of New York & Trust Company, New York City, celebrates this month two dates significant in the history of American banking. Alexander Hamilton and associates on March 15, 1784, founded the Bank of New York, the first institution of its kind to be established in that city, and on March 9, 1830, the New York Life Insurance and Trust Company was chartered by special act of the Legislature—the first institution, it is said, to use the words "trust company" as part of its title. The two institutions were consolidated in 1922 as the Bank of New York & Trust Company.

**\$1,000,000 Expansion Program.**

As the first step in a contemplated \$1,000,000 expansion program, the Newman Manufacturing Company, Norwood, Ohio, has acquired the entire plant equipment, stock, unfilled contracts and good will of the Midwest Metal Art Company, Cincinnati, fabricators of wrought iron work. For the present, operations will continue at the Midwest plant, but it is the plan of the Newman Company to transfer the equipment to Norwood within 60 to 90 days. The acquisition will be known as the Midwest Metal Art Division of the Newman Manufacturing Company.

**Signs of Better Business.**

In a letter to the Manufacturers Record dated March 14, Geo. D. Whitcomb Company, Rochelle, Ill., writes: "You will notice that we are building locomotives up to 100 tons in size, and since the first of the year have sold several large 50-ton locomotives for railway service. You might be interested to know we are enjoying a very fine business here at our plant and recently made several additions on our plant and office. We are now retooling our shop with new and modern machine tools."

**Texas Power and Light Report.**

Gross earnings from operations of the Texas Power and Light Company, Dallas, a subsidiary of the Southwestern Power and Light Company, New York, for the year ended December 31, 1929, amounted to \$9,552,819, as compared with \$9,717,664 for 1928. The total income of \$4,996,261 for 1929 shows an increase of \$93,885 as compared with 1928.

**Building and Engineering Units Affiliate.**

The National Building Units Corporation, Philadelphia, have acquired exclusive rights to manufacture and license others to manufacture Covell building units for use in "Weldcrete" masonry construction. In return for the license the Covell Corporation, Philadelphia, has acquired a substantial interest in the National Building Units Corporation, so that future activities of the two companies may be closely connected.

**Offers Foreign Trade Service.**

An example of the development of modern distribution is offered by the Bush Service Corporation, New York, international agency formed by Irving T. Bush through affiliation of 54 foreign service and forwarding companies with the Bush organization. The Bush Service Corporation assumes full responsibility for safe conduct and handling of merchandise, subject to shipper's instructions. The service is described in a pamphlet the Bush company has issued.

**Stone & Webster Analysis.**

An interesting analysis of Stone & Webster, Inc., Boston, Mass., is presented in a pamphlet distributed by Strother, Brogden & Co., bankers, Baltimore, Md. As a holding company owning all or a controlling interest in a number of other companies, the consummation of a proposed plan to consolidate the Stone & Webster organization with that of the Engineers Public Service Company will give the former an additional important unit.

**Softening and Lubricating Agent for Textile Processes.**

The Carbide and Carbon Chemicals Corporation, New York, is now marketing diethylene glycol, said to be similar in many respects to ethylene glycol but sufficiently individual to find special uses in the chemical industry. It is being used as a softening and lubricating agent in textile processes and is claimed to offer tremendous advantages as a lubricant for wool, worsted, cotton, rayon and silk. Properties of the compound are described in data sheets issued by the company and its textile uses detailed in an information sheet and reprint.

**Reduction Unit for Agitator Drives.**

To acquire necessary speed reduction on heavy duty agitator drives, a smelting and refining company at Perth Amboy, N. J., uses a unique gear unit assembly, consisting of a 20-horsepower, 1150 r. p. m. motor, transmitting power first through a Westinghouse-Nuttall type SVR single reduction unit having a ratio of 7.9:1 and then through a Westinghouse-Nuttall right angle bevel gear unit having a ratio of 2 to 1. The motor and SVR unit are mounted on a cast iron bedplate which in turn is mounted with the other unit on a flatrolled steel plate. Flexible couplings connect the motor and units.

**American Locomotive Company Report.**

The twenty-eighth annual report of the American Locomotive Company, New York, and its subsidiary companies, for the year ended December 31, 1929, shows net earnings from all sources, after deducting manufacturing, maintenance and administrative expenses, of \$8,796,039. Profits for the year, after depreciation of \$1,430,489 and all other charges, amounted to \$6,851,300. Deducting annual dividends of 7 per cent on the preferred stock amounting to \$2,695,000, there remained a balance of profits of \$4,156,300, equivalent to \$5.40 per share on common stock outstanding. Surplus as of December 31, 1929, amounted to \$22,141,395.

**Report of United States Pipe and Foundry Company.**

The thirty-first report of the United States Pipe and Foundry Company, Burlington, N. J., for the fiscal year ended December 31, 1929, shows net profits from operations of \$2,581,229, as compared with \$1,812,227 in 1928. Directors of the company declared dividends on first and second preferred stocks of \$1.20 per share payable quarterly, the payment of dividends on the second preferred stock being subject to discontinuance in event of redemption of this stock before all dividends are paid. A dividend of \$2.00 per share was declared on the common stock, payable 50 cents per share quarterly.

**Stromberg Has Profitable Year.**

The Stromberg Electric Co., Chicago, according to its annual report, had in 1929 the most profitable year in its history. The ratio of current assets to current liabilities as of December 31 was 4½ to 1. The 1930 plans of the company include continued expansion of organization and advertising, introduction of new and improved devices and entrance into the foreign field, which is said to offer a good market for the company's products, consisting of time recording, signaling and other devices.

**Cleveland Branch Reeves Pulley Company.**

A new branch recently opened in Cleveland, Ohio, by the Reeves Pulley Company, Columbus, Ind., will be in charge of D. C. Batterson and J. H. Gepfert. Mr. Batterson has been in charge of the Reeves Pulley Company in the Minneapolis territory for more than three years, while Mr. Gepfert has been associated with the Reeves transmission for a number of years in the Cleveland territory.

**International Cement Corporation's Report.**

The 40th quarterly report of the International Cement Corporation, New York, covering the fourth quarter of 1929, shows gross sales of \$8,490,054, as compared with \$10,377,104 for the third quarter. Net sales for the last quarter of 1929 amounted to \$6,768,054, while the manufacturing cost, including depreciation, was \$4,215,887, leaving a manufacturing profit of \$2,552,167.

**Ohio Electric Manufacturing Co.**

The Ohio Electric & Controller Co., Cleveland, has changed its name to the Ohio Electric Manufacturing Co. It manufactures lifting magnets and small motors, maintaining branch offices in various sections of this country and Canada, with Southern offices at Birmingham and Chattanooga.

# Sensitiveness

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BOSTON	DETROIT	LOS ANGELES	PROVIDENCE	TULSA
BUFFALO	ERIE	LOUISVILLE	READING	WACO
CANTON	FORT WAYNE	MEMPHIS	RICHMOND	WASHINGTON
CHICAGO	FORT WORTH	MIAMI	ROCHESTER	WHEELING
CINCINNATI	GRAND RAPIDS	MILWAUKEE	ST. LOUIS	WILMINGTON, DEL.
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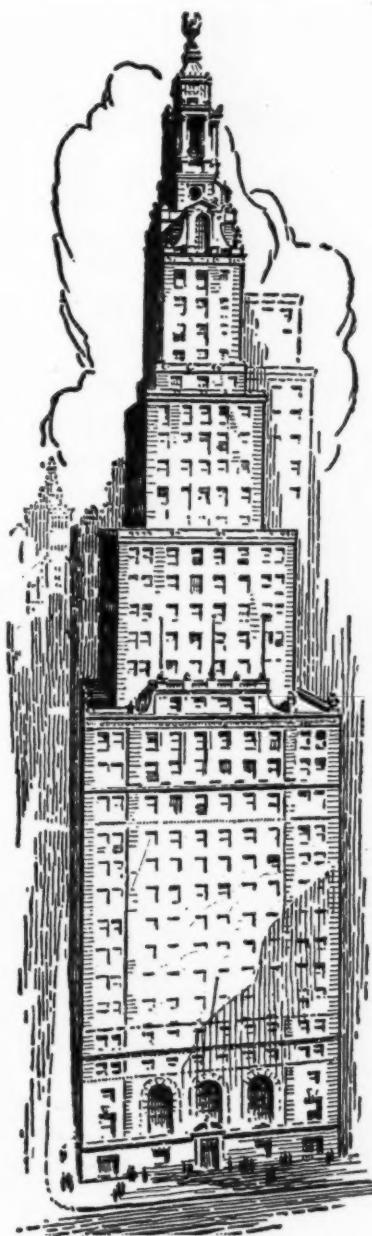
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## An Anniversary Unique in American Banking

THE Bank of New York & Trust Company celebrates this month two significant dates in the history of banking in America.

It was on March 15, 1784 that Alexander Hamilton and a group of leading merchants founded the Bank of New York, the first bank to be established in the city. It was on March 9, 1830, that The New York Life Insurance and Trust Company was chartered by special act of the Legislature—the first institution in this country to use the words "trust company" as part of its title.

The traditions of these organizations, bridging three centuries of the Bank of New York and now covering a full century of The New York Life Insurance and Trust Company, became the heritage of the Bank of New York & Trust Company in 1922 through a consolidation. That heritage rests secure for the future upon a foundation of complete Commercial Banking and Trust services, rendered with the personal attention to details which has always characterized New York's oldest bank.



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## FINANCIAL NEWS

### Bond Issues Proposed

Ala., Alabama City—Paving—City Council receives bids April 1 for \$10,000 bonds.

Ark., Mena—Water—City, Waterworks Comrs., receives bids April 10 for \$40,000, 6% bonds; W. N. Martin, City Clk. 2-20

Fla., Belle Glade—Water—City, reported, voted \$30,000 bonds. 2-13

Fla., De Funniak Springs—Walton County Comms., M. T. Fountain, Clk., receive bids April 2 for \$90,000, 6%, \$1,000 denom. bonds: \$40,000, jail; \$50,000, hospital.

Fla., De Funniak Springs—Assessment—Town, J. F. Howell, Clk., receives bids April 2 for \$38,000, 6%, \$500 denom. bonds.

Fla., Largo—Bd. of Supvrs. Lake Largo-Cross Bayou Drainage Dist. receives bids April 4 for \$70,000 6% drainage bonds.

Fla., Live Oak—City Bond Trustees, E. S. Conner, receive bids April 25 for \$31,000, 5% and \$100 denom. refunding bonds.

Fla., Miami Beach—City, C. W. Tomlinson, Clk., voted \$1,045,000 bonds: \$45,000, water works; \$70,000, bridges over waterways; \$900,000, purchase golf course; E. R. Neff, City Engr.

Fla., St. Petersburg—Indebtedness—City, H. T. Davis, Dir. of Finance, considering selling \$500,000 bonds.

Fla., Tampa—City, A. B. Stewart, Comptroller, plans receiving bids soon for \$750,000 airport bonds; advises no election is planned to vote \$2,000,000 airport, paving and bridge bonds. 3-13

Ga., Macon—City, G. Glen Toole, Mayor, defeated \$1,000,000 bond issue: \$350,000, storm sewers; \$150,000, sanitary sewers; \$100,000, hospital; \$200,000, street paving; \$100,000, parks; \$100,000, incinerators. 2-20

Ky., Ashland—Bd. of Education receives bids April 3 for \$100,000, 4 1/2%, \$1,000 denom. school improvement bonds.

Ky., Hopkinsville—Road—Christian County receives bids April 1 for \$220,000 bonds.

Ky., Louisville—Sewer—City receives bids April 2 for \$2,000,000, 4 and 4 1/4% bonds.

La., Bastrop—Morehouse Parish, Road Dist. No. 4, voted \$165,000 road and bridge bonds; Ward 8 defeated \$37,500 bond issue. 1-16, 2-13

La., Gilbert—Village, C. B. Sherrouse, Clk., receives bids April 9 for \$25,000 not to exceed 6% public improvement bonds.

La., Oberlin—Water—Village, A. E. Darbonne, Mayor, receives bids April 8 for \$25,000, 6%, \$500 denom. bonds. 12-26

Md., Easton—Talbot County Comms., J. McKenney Willis, Pres., receive bids April 1 for \$30,000, 4%, \$1,000 denom., general school loan bonds.

Miss., Carthage—Leake County Bd. of Supvrs., called election for March 28 on \$60,000 bonds, for Walnut Grove Consolidated Public School Dist.

Miss., Kosciusko—Attala County Bd. of Supvrs., called election for April 3 on \$250,000 Separate Road Dist. bonds. 3-20

Miss., Laurel—Jones County Bd. of Supvrs., W. L. Busby, Clk., probably receive bids May 1 for \$70,000 courthouse bonds.

Miss., Westpoint—Comms. of Shuqualachnee Drainage Dist. No. 1, Clay and Chickasaw Counties, H. S. Gilleylen, Jr., Sec., receive bids March 31 for \$22,500, 6% drainage bonds.

Mo., California—City, F. H. Hert, Clk., voted April 1 on \$45,000 light plant bonds.

Mo., Cameron—Road—Comms. of Cameron Special Road Dist., Clinton County, Chas. G. Jones, Clk., called election for April 1 on \$25,000, not to exceed 6% bonds.

Mo., Cape Girardeau—City, N. A. Barks, Mayor, advises no bond issue contemplated; lately noted plans \$1,400,000 bond election for light plant and water. 3-13

North Carolina—State of North Carolina, Nathan O'Berry, State Treas., will offer, March 31, \$8,920,000, 4 1/4% bonds, for Smoky Mountains National Park, bridge, World War veteran fund, etc.; previously noted bids on \$13,067,000 bonds.

N. C., Charlotte—City, R. W. Riggsby, Mgr., considering selling latter part of April, \$3,000,000 bonds; considering \$100,000 bond issue for underpass and street paving.

N. C., Greenville—Road—Pitt County Comms., J. C. Gaskins, Clk., receive bids April 8 for \$450,000, \$1,000 denom. not to exceed 6% refunding bonds.

N. C., Lumberton—Improvement—Comms., Robeson Drainage Dist. No. 4, Junius J. Goodwin, Office Atty., receive bids April 10 for \$30,000, 6% bonds.

N. C., Spruce Pine—Town, J. D. Duncan, Clk., receives bids April 1 for \$25,000, 6% public hospital bonds.

Okla., Fletcher—Sewer—City voted \$27,000 bonds.

Okla., Norman—School—City voted \$95,000 bonds; W. L. Gibbs, Pres. School Bd. 1-30

Okla., Sayre—City votes March 31 on \$261,500 bonds: \$105,000, waterworks extension and standpipe; \$32,000, sewer extension; \$30,000, city auditorium; \$28,500, library; \$33,000, school; \$33,000, jetties. 2-27

S. C., Fort Mill—Fort Mill School Dist. No. 28 voted \$75,000 bonds; Dr. J. B. Elliott, Chmn. Bd. of School Trustees. 3-13

S. C., Fort Mill—School Bd., Fort Mill School Dist. No. 28, considering selling \$75,000, 4 1/2% to 5 1/2% bonds; Dr. J. B. Elliott, Chmn. 3-13

S. C., Greenville—Road—Greenville County considering \$200,000 bond issue.

S. C., Orangeburg—Bd. of Trustees, Orangeburg County School Dist. No. 26, W. A. Livingston, Chmn., receives bids April 10 for \$167,000, 5%, \$1,000 denom. bonds.

Tex., Angleton—Brazoria County Comms., E. C. Tobey, Chmn. of Central Committee, Freeport, plans \$4,500,000 bond issue: \$1,500,000 for outstanding bonds; \$1,500,000 to State Highway Dept.; \$1,500,000 to \$2,000,000 for lateral roads; advises probably be 90 days before anything definite is decided. 3-20

Tex., Bryan—City Comms., called election for April 22 on \$100,000 bonds to retire outstanding school warrants and erect school building.

Tex., Edinburg—Hidalgo County Irrigation Dist. No. 12 voted \$5,500,000 irrigation bonds.

Tex., Gonzales—Gonzales Independent School Dist. voted \$40,000 5% bonds; School Bd., J. W. Verner, Pres., probably purchase bonds. 3-6

Tex., High Island—High Island voted \$12,000 bonds; C. E. Kennedy, School Supt. 2-20

Tex., Fort Stockton—Road—Pecos County Comms., considering \$500,000 bond election.

Tex., Lubbock—Courthouse, Jail—Lubbock County votes soon on \$250,000 bonds.

Tex., Newton—Road—Newton County considering \$250,000 bond issue.

Tex., Ozona—Road—Crockett County votes April 12 on \$375,000 bonds; lately noted votes March 15. 2-27

Tex., Pasadena—City, G. W. Conrad, Mayor, receives bids April 8 for \$120,000, 6% municipal bonds. 3-20

Tex., Robert Lee—Water—City receives bids soon for \$30,000 bonds.

Tex., Rio Grande—Starr County Water Control and Improvement Dist. No. 1, Lino Perez, Pres., receives bids April 4 for \$1,200,000, 6% bonds. 2-13

Tex., Runge—School—City votes April 2 on bonds.

Tex., San Angelo—City voted \$150,000 school bonds; S. W. Marsh, Pres., Bd. of Education. 2-20

Tex., Sinton—Road—San Patricio County Comms., Court, J. C. Houts, County Judge, plans receiving bids for \$225,000, of \$500,000 bonds previously voted. 2-13

Tex., Stinnett—Road—Hutchinson County, H. M. Hood, County Judge, did not sell \$30,000, 5% bonds; lately noted bids March 3. 2-27

Tex., Taft—City votes April 1 on \$135,000 bonds: \$105,000, street; \$30,000, fire station.

Tex., Waco—McLennan County, R. B. Stanford, County Judge, receives bids April 1 for \$850,000, 4 1/2%, \$1,000 denom. obligation bonds.

Va., Luray—Town considering \$164,000 bond election: \$52,000, water supply and fire protection; \$36,000, sewer; \$26,000, bridge and road.

Va., Winchester—City receives bids soon for \$145,000 school, sewer and street bonds, of \$500,000 bonds previously voted.

W. Va., Huntington—Bd. of Education, Harry W. Pollock, Pres., called election for May 3 on \$1,790,000 bonds. 3-13

### Bond Issues Sold

La., Bastrop—Hospital—City, C. J. Goodwin, Mayor, sold \$65,000, 5% bonds to Commercial National Co., Shreveport, at par and accrued interest.

Miss., Hattiesburg—Water—City, W. S. F. Tatum, Mayor, sold \$450,000, 5 1/4% bonds to Seasidegood & Mayer, Cincinnati; recently reported rejected bids. 3-6

Mo., Kansas City—School Bd., W. C. Almoefer, Treas., sold \$500,000, 4 1/2% school dist. bonds at 102.97, to Harris, Forbes & Co., New York. 3-13

Oklahoma—State School Land Coms., Oklahoma City, sold \$115,000 bonds to R. J. Edwards, Inc., First Natl. Bank Bldg., Oklahoma City, at par, accrued interest and \$15 premium; \$78,000 bonds to Brown-Crummer Co., Wichita, Kansas, par, accrued interest; \$20,000 bonds to Prescott, Wright, Snider Co., 918 Baltimore Ave., Kansas City, Mo., at par, accrued interest and \$10 premium.

Okl., Arapaho—Road—Custer County Comms., Jesse Hatchett, County Clk., sold \$900,000 bonds to American First Trust Co.

Okl., Snyder—City sold \$40,000 bonds to R. J. Edwards, Inc., Oklahoma City: \$22,000 water; \$15,000, town hall; \$3000, fire-fighting equipment.

South Carolina—Highway—State of South Carolina, J. H. Scarborough, State Treas., Columbia, sold \$10,000,000, 4 1/2% certificates of indebtedness to South Carolina National Bank at premium of \$235,976. 3-13

Tenn., Centerville—Water—City sold \$50,000, 5 1/2% bonds to Little, Wooten & Co., Jackson, Tenn., at \$575 premium.

Tex., Aransas Pass—Seawall—Conn Brown, 432 Donaldson St., San Antonio, reported, purchased \$60,000 bonds at par.

Tex., Ballinger—City, K. V. Worthington, Sec., sold \$145,000, 5%, \$1,000 denom. bonds at 97.75 and accrued interest, to H. C. Burt & Co., Houston; \$110,000 water; \$35,000, city hall. 3-6

Tex., Beaumont—City of Beaumont purchased \$30,000 street paving bonds; Paul H. Millard, City Mgr.

Tex., Beaumont—Courthouse—Jefferson County, B. B. Johnson, County Judge, sold \$1,000,000, 5% bonds to Republic National Bank, Dallas, at par, accrued interest and \$4,500 premium. 2-27

Tex., Dallas—Road—Dallas County Coms., Court, F. H. Alexander, County Judge, sold \$3,000,000 4 3/4% bonds at 100.669, to George L. Simpson & Co., Dallas. 3-13

Tex., Del Rio—Roy M. Andrews, Supt., Public Schools, sold \$185,000 Del Rio Independent School bonds to State Dept. of Education, at par and accrued interest. 3-13

Tex., Galveston—Road—Stranahan, Harris & Oatis, Inc., Toledo, H. M. Bylesby & Co., Inc., Chicago, and Oatis & Co., Cleveland, offering \$700,000, 5% road bonds, recently purchased. 1-30

Tex., Laredo—City, Albert Martin, Mayor, sold \$225,000 Laredo Independent School Dist. bonds to Dallas Union Trust Co., Dallas, at par and accrued interest. 7-11

Tex., Lubbock—Road—Lubbock County sold \$300,000 5% bonds to syndicate composed of Caldwell & Co., Nashville, Tenn., White-Phillips Co., Davenport, Iowa, D. E. Dunne & Co., Wichita, Kansas, at 99.10.

Va., Petersburg—City, Paul Morton, Mgr., sold \$200,000 4 3/4%, \$1,000 denom. public improvement and funding bonds, jointly, to Frederick E. Nolting & Co., Richmond, and Harris, Forbes & Co., New York, for \$211,214 and accrued interest. 3-6

### New Financial Corporations

Ala., Jasper—Central Bank & Trust Co., capital and assets over \$1,000,000, formed by merger of Central Bank & Trust Co. and Jasper Trust Co.; George H. Davis, Pres.; O. F. Cobb, V.-P.

Ala., Oneonta—Blount County State Bank, capital \$25,000, chartered; A. A. Finney, Pres.; will take over assets of Blount County Bank, which recently failed.

Fla., Winter Haven—Snell National Bank in Winter Haven, capital \$200,000, chartered; J. A. Griffin, Pres.; L. B. Anderson, Cashier.

La., Laplace—Laplace Finance Co., Inc.,

(Continued on page 94)

## *Announcing*

### *the 1930 BLUE BOOK of SOUTHERN PROGRESS*

**C**ONTAINING condensed facts and figures on the South's resources, progress and opportunities . . . discussions of the labor situation that all students of business should read; a discussion of the leading industries, the textile situation, sugar growing and by - products manufacture, woodworking, paper making, fertilizer manufacturing, mining and minerals including gas and oil and ceramic industries, farm production, aviation progress and other features of the South's development . . . A special section will be devoted to the South's power resources and expansion programs of public utilities, . . . Southern construction work, building, highways, railroads and waterways and a review of foreign commerce through Southern ports.

ADVERTISING SPACE RESERVATIONS  
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*Published annually by*

MANUFACTURERS RECORD  
BALTIMORE, Md.

THE SOUTH—"THE TREASURE HOUSE OF THE NATION"

## FINANCIAL NEWS

(Continued from page 92)

capital \$15,000, chartered; G. A. Lasseigne, Pres.; Eugene H. Payne, Sec.

Mo., St. Louis—Company for Trading and Investing, Inc., capital \$50,000, chartered; Robert M. Dallmeyer, Roswell Messing; J. Clarence Taussig, Boatmen's Bank Bldg.; deal in stocks, bonds.

Mo., St. Louis—Lydiade Investment Trust, capital \$50,000, chartered; Lydia D. and G. A. Buder.

S. C., Columbia—Central Union Bank of South Carolina, capital \$600,000, opened; W. J. Roddey, Chmn. of Bd.; W. J. Roddey, Jr., Pres. 3-20

Tex., Port Arthur—Gulf Bank & Trust Co., 500 Proctor St., capital \$100,000, reorganized; E. E. Hartford, Pres.; Arthur Mauldin, V.-P. 3-20

Bank of Townley, A. M. Grimsley, Pres., Townley, Ala., merged with Carbon Hill State Bank, J. T. Wakefield, Pres., Carbon Hill, Ala.; J. T. Wakefield will be president of new bank.

Boards of Directors of Third National Bank, and Columbus Bank & Trust Co., Wm. C. Bradley, Pres. of both, Columbus, Ga., announced approval of plan of merger and combination of banks, with main offices at present location of Third National, Broadway and Twelfth St.; capital \$850,000; surplus and undivided profits \$880,703, as of Dec. 31, 1929.

Clayton Investment Co., Houston, Tex., plans increasing capital \$200,000 to \$300,000.

Equitable Trust Co., H. L. Pope, V.-P., Baltimore, Md., opened branch bank at 3419 Eastern Ave., with J. Lawrence Rosenberger, Mgr.

Federal Bank & Trust Co., G. W. Donaghey, Pres., and Central Bank, C. C. Kavanaugh, Pres., both Little Rock, Ark., merged with George W. Donaghey, Chmn. of Bd.; Dr. Robert Caldwell, Pres.

First State Bank, D. P. Metcalfe, Pres., Optima, Okla., has moved institution to Hardesty, Okla.

Pageland Bank & Trust Co., Pageland, S. C., plans reopening.

Peoples State Bank of South Carolina, R. G. Rhett, Jr., Pres., Charleston, purchased Planters' National Bank, A. D. Matheson, Pres., Bennettsville, S. C.; will operate as Bennettsville Branch of Peoples State Bank.

Prince George County Bank, J. J. Temple, Pres., Prince George, Va., purchased Farmers' Bank, L. H. Binford, Pres., Disputanta, Va.

### Options on Lead and Zinc Lands

Waynesville, N. C.—Options have been secured by the United States Smelting, Mining and Refining Company, Boston, Mass., on approximately 2000 acres of lead, zinc and copper lands in the northeastern section of Haywood County, owned by James Atkins, Jr., of this city; Rev. J. P. Mangum, Lexington, N. C., and Chambliss Keith, of Selma, Ala. According to H. J. Bryson, State Geologist, Raleigh, lead, zinc and copper ores occur in a quartz vein about 12 feet thick, the vein material being about 4 inches thick at the surface and 71 inches at a depth of 34 feet. A shaft on the property has been increased to 40 feet, where the vein has widened to 9 feet. Ore is said to have been found for a distance of several hundred feet continuously along the surface, and core drilling is now being done by the company, it is said, in order to prospect thoroughly. Should the ore prove to be a large body, it is understood the company plans to build a concentrating plant or a smelter.

on "Planning of School Grounds" illustrated by work of Mr. Draper. Also, the February 15 issue of the Textile World Journal contained an article, with a number of illustrations of landscape work in Southern mill villages, devoted to an annual review by Mr. Draper of Southern mill village improvements.

### Begins Using Natural Gas

Birmingham, Ala.—Carrying out its plans for the use of natural gas, as announced a few weeks ago when it executed a contract with the Southern Natural Gas Corporation, Birmingham, the Tennessee Coal, Iron & Railroad Company has converted several furnaces at Ensley to natural gas fuel. Certain operations of the company at Bessemer are expected to start using natural gas early in April and at Fairfield a little later. The Southern Natural Gas Corporation recently completed a main gas line from the Monroe and Richland fields in Northeastern Louisiana, across Mississippi and Alabama to Atlanta, and it is understood that the Tennessee Coal, Iron & Railroad Company will consume about 2,000,000 cubic feet daily.

### Public Park and Landscape Development Activity in Southeast

An authoritative discussion of the progress in park improvements in the South is presented in an article in "Parks and Recreation," published at Rockford, Ill. The story is in two parts and appears under the title, "Park Development in the Southeast," and is reprinted from a paper read at the annual meeting of park organizations in Miami last fall by E. S. Draper, landscape architect and engineer, Charlotte, N. C., and Fellow of the American Institute of Park Executives. The article tells of the park activities of Southern cities, including Charlotte, Greensboro, Asheville and Wilmington.

The February issue of "The Southern Architect," of Atlanta, carried an article

### Manufacturers of Orlando Organize

About 60 manufacturers of Orlando, Fla., have organized the Manufacturers Unit of the Chamber of Commerce, with the following officers: G. B. Hurlburt of Newell & Hurlburt, manufacturers of concrete brick, chairman; Chester A. Russ, mattress manufacturer; J. M. McCormick of McCormick Hannah Company, mill works; E. Harold Johnson of the South Florida Foundry and Machine Works; and L. H. Gibbs of the Gibbs Machine Company, manufacturers of warehouse trucks. The new organization will assemble all available facts regarding existing industries in Orlando and will seek to determine what contributing industries can advantageously be established.

### Southern Forestry Congress

A tentative program for the twelfth annual meeting of the Southern Forestry Congress, Inc., at the Peabody Hotel, Memphis, Tenn., on April 10, 11 and 12, covers morning and afternoon sessions on the first two days, with a night session on April 11 and a morning session on April 12. Mayor Watkins Overton will welcome the Congress and George T. Houston, Memphis, president, will respond, following which Governor H. H. Horton of Tennessee will address the body. Other prominent speakers from various sections of the country will address the Congress and present papers on many subjects vital to forestry and forest conservation. R. S. Maddox, state forester of Tennessee, Nashville, is secretary of the Congress and E. F. Allison, of the Allison Lumber Company, Bellamy, Ala., is vice-president.

### President of Railway Engineering Association

Richmond, Va.—George Doswell Brooke of this city, general manager of the Chesapeake and Ohio Railway Company, has been elected president of the American Railway Engineering Association, Chicago, the announcement being made at the annual dinner of the association in connection with the thirty-first annual convention recently held in Chicago. The organization, whose membership is representative of important railroad systems in this country and Canada, as well as abroad, functions for the advancement of knowledge pertaining to scientific research and practical construction, operation and maintenance of railways. Although independent in its organization, the association also is an instrument of the American Railway Association.

Dallas, Tex.—A new issue of \$3,000,000 Dallas County road bonds, bearing an interest rate of 4 1/4 per cent, has been sold to George L. Simpson & Company, Dallas, at 100.669.

# — PROPOSALS —

BOND ISSUES

BUILDINGS

PAVING

GOOD ROADS



Bids close April 23, 1930.

TREASURY DEPARTMENT, office of the Supervising Architect, Washington, D. C., March 22, 1930.—Invitation is withdrawn for bids to be opened in this office at 3 P. M. April 23, 1930, for the construction (except elevator and lift) of the U. S. Post Office and Court House at Lynchburg, Va., including demolition and clearing site. JAS. A. WETMORE, Acting Supervising Architect.

Bids close March 31, 1930.

War Department, Office Constructing Quartermaster, Fort Bragg, N. C.—Sealed proposals in triplicate will be received until 10 A. M. March 31, 1930, and then publicly opened, for the construction and completion of one (1) Field Artillery Regimental Barracks and Utilities at Fort Bragg, North Carolina. \$25.00 deposit certified check, payable to Treasurer of United States, required for drawings, etc. Further information on request.

Bids close April 4, 1930.

U. S. ENGINEER OFFICE, Montgomery, Ala.—Sealed bids, in triplicate, will be received until 2:30 P. M. April 4, 1930, and then publicly opened, for furnishing all labor and materials and performing all work for fabricating and delivering at Pensacola, Fla., or for fabricating and erecting, at Fort Pickens, Fla., near Pensacola, Fla., three (3) rigid steel towers. Information on application.

Bids close March 31, 1930.

## \$8,920,000 State of North Carolina Bonds

Raleigh, N. C.

I will receive sealed bids until noon, March 31, 1930, at my office in Raleigh, N. C., for all or any part of \$8,920,000 State of North Carolina 4 1/4% Bonds, 2% certified check required. Prospective with further details will be furnished on application therefor or may be obtained from Masslich and Mitchell, 120 Broadway, New York City, whose approving opinion will be furnished purchasers, with the additional approving opinion of Reed, Hoyt and Washburn, New York City, upon \$2,000,000 Park Bonds included in the offering. The right to reject any or all bids is reserved.

NATHAN O'BERRY,  
State Treasurer.

## Toll Bridges

Baton Rouge, La., March 13, 1930.

The Louisiana Highway Commission, Louisiana National Bank Building, Baton Rouge, Louisiana, will receive informal proposals for the financing, design, construction and operation of Toll Bridges at the following locations:

MORGAN CITY OVER ATCHAFALAYA RIVER  
MELVILLE OVER ATCHAFALAYA RIVER  
COUSHATTA OVER RED RIVER  
MONCLA OVER RED RIVER  
JONESVILLE OVER BLACK RIVER  
HARRISONBURG OVER OUACHITA RIVER

MONOE OVER OUACHITA RIVER  
STERLINGTON OVER OUACHITA RIVER  
Total estimated cost of the above bridges is \$6,250,000.

Proposals must include the entire group of bridges as a unit. Separate proposals for individual bridges will not be considered. Proposals must be in conformity with Louisiana Statutes authorizing issue of franchise for constructing and operating toll bridges. Designs must be approved by the State Highway Engineer and by the War Department.

Proposals will be furnished by the bidder. The Commission reserves the right to reject any or all proposals or to select the proposal which is the most desirable.

HARRY B. HENDERLITE,  
State Highway Engineer.  
O. K. ALLEN, Chairman,  
Louisiana Highway Commission.

## GENERAL INFORMATION

### About Proposal Advertising in Manufacturers Record

PUBLICATION DAY: Thursday.

FORMS CLOSE: 10 A. M. Tuesday.

When too late to send copy by regular mail to reach us by 10 A. M. Tuesday, forward by night letter or air mail when possible.

### THE DAILY CONSTRUCTION BULLETIN OF THE MANUFACTURERS RECORD:

Published every business day, gives information about the industrial, commercial and financial activities of the South and Southwest.

The Daily Construction Bulletin can be used to advantage when copy cannot reach us in time for publication in the Manufacturers Record before bids are to be opened or when daily insertions are necessary to meet legal requirements.

*The rate is the same for both publications—35 cents a line each insertion.*

Bids close May 1, 1930.

TREASURY DEPARTMENT, Bureau of Engraving and Printing, Washington, D. C., March 20, 1930.—Sealed proposals are invited to furnish this Bureau with check paper, postage stamp paper, and internal revenue paper, during the fiscal year beginning July 1, 1930. Contracts will be made only with actual manufacturers of postage stamp and internal revenue paper. Proposals to be received not later than 2 p. m., Thursday, May 1, 1930. Blank forms with specifications for proposals and further information will be furnished on application to A. W. HALL, Director.

Bids close April 8, 1930.

## Underpass

Charlotte, N. C.

Sealed bids will be received by the City Manager of the City of Charlotte, N. C., in the Council Chamber of the City Hall until 11 o'clock A. M. on the 8th day of April, 1930, for the construction of a reinforced concrete and steel underpass under the Southern Railway at North Tryon Street, furnishing all materials, equipment and labor incidental thereto.

Complete plans, specifications and proposal forms may be had at the office of the City Engineer.

A deposit of ten dollars (\$10.00) will be charged for each set of plans, specifications and proposal forms. Bidders who submit bona fide bids and return the plans and specifications in good condition within fifteen days (15) after date of award will have this deposit returned to them.

The construction contemplated will include approximately 3000 cubic yards of earth excavation, one cubic yard of solid rock excavation, ten cubic yards of loose rock excavation, the removal of 400 cubic yards of present plain and reinforced concrete and stone masonry; 207 cubic yards class "B" concrete; 1500 cubic yards class "C" concrete; 191,200 lbs reinforcing steel, 360,000 lbs structural steel, 390 linear feet of 18-inch reinforced concrete storm drain pipe with 2 manholes, 4435 square feet waterproof membrane, 4185 square feet elastic planking; 7940 square feet iron oxide waterproof; lump sums on hand rail complete in place, electric work complete in place and removing present deck slab.

The right is reserved to reject any or all bids. No bid will be considered except from those duly licensed under provisions of the State as "An Act to Regulate the Practice of General Contracting," as passed by the General Assembly of 1925. A certified check must accompany all bids in the amount of \$3000.00 (THREE THOUSAND DOLLARS).

R. W. RIGSBY,  
City Manager.

Bids close April 8, 1930.

## Virginia Highway Work

Richmond, Va.

10 A. M. 1930 St. Office Bldg., Rt. 14, Proj. F521B1, 5-30' Reinf. Conc. Beam Spans, 354 Cu. Yds. A Conc., 59,485 Lbs. Reinf. Steel. Rt. 31, Proj. F569CB1, Chesterfield County, 2.2 Mi. Cone., 18,426 Cu. Yds. Excav., 23,084 Cu. Yds. Conc., including br. over Falling Cr., 5-30' Steel Beam Spans. Rt. 39, Proj. S356ACDF, Warwick County, 9.5 Mi. Conc., 38,000 Sq. Yds. Conc., 24,000 Cu. Yds. Excav. Details obtainable upon request.

## Louisiana Highway Work

CANCkELLED REQUEST FOR BIDS

Baton Rouge, La., March 15, 1930.

Notice is hereby given that the Louisiana Highway Commission has cancelled request for bids for paving the Project described below, bids for which were to have been received and opened on

TUESDAY, APRIL 1, 1930.

PROJECT NO. 2550

MANSFIELD-GRAND CANE HIGHWAY

DE SOTO PARISH

ROUTE NO. 1, LENGTH 7.0 MI.

HARRY B. HENDERLITE,

State Highway Engineer.

O. K. ALLEN, Chairman,

Louisiana Highway Commission.

Bids close April 8, 1930.

## Maryland Highway Work

DEPARTMENT OF PUBLIC WORKS

STATE OF MARYLAND

STATE ROADS COMMISSION

### NOTICE TO CONTRACTORS

Baltimore, Md.

SEALED PROPOSALS for building seven sections of State Highway as follows:

Allegany County, Contract No. A-69-68—One section of State Highway along the National Pike, from Town Creek to the top of Polish Mountain, a distance of 1.55 miles (concrete shoulders).

Anne Arundel County, Contract No. AA-84-74—One section of State Highway from Stony Creek toward Jacobsville, a distance of 1.0 mile (concrete).

Calvert County, Contract No. C-37-82—One section of State Highway from the Southern Maryland Blvd. to Mt. Harmony, a distance of 2.78 miles (gravel).

Frederick County, Contract No. F-82-64—One section of State Highway from Grossnickle toward Middlepoint, a distance of 1.7 miles (concrete).

Howard and Montgomery Counties, Contract No. Ho-72, M-142-54—Federal Aid Project No. 210—One section of State Highway along the National Pike from the end of Contract No. Ho-44 to the end of Contract No. M-121, a distance of 1.94 miles (concrete).

Washington County, Contract No. W-71-64—One section of State Highway from Weverton toward Gapland, a distance of 0.5 mile (concrete).

Washington County, Contract No. W-75-68—One section of State Highway along the National Pike from end of Contract No. W-1-B West of Hancock to Sidelong Hill Creek, a distance of 4.72 miles (concrete shoulders),

will be received by the State Roads Commission at its offices, Federal Reserve Bank Building, Calvert and Lexington Streets, Baltimore, Maryland, until 12 M. on the 8th day of April, 1930, at which time and place they will be publicly opened and read.

Bids must be made upon the blank proposal form which, with specifications and plans, will be furnished by the Commission upon application and cash payment of \$1.00, as hereinafter no charges will be permitted.

No bids will be received unless accompanied by a certified check for the sum of Five Hundred (\$500) Dollars, payable to the State Roads Commission.

The successful bidder will be required to give bond and comply with the Acts of the General Assembly of Maryland respecting contracts.

The Commission reserves the right to reject any and all bids.

BY ORDER of the State Roads Commission this 24th day of March, 1930.

G. CLINTON UHL, Chairman.

L. H. STEUART, Secretary.

## PROPOSALS

## Manufacturers Record

Bids close April 7, 1930.

## Road Work

Belzoni, Miss.

The Commissioners of the Main Separate Road District of Supervisors' District No. 4, of Humphreys County, Mississippi, up until 12 o'clock noon on

MONDAY the 7th day of April, 1930 will receive sealed bids for the following work, construction, and material, on 24 miles of public roads in said District:

Approximately 377,000 cubic yards of road dirt fill. (Dragline work).

Approximately 7.5 miles machine road grading.

Approximately 3.6 miles grubbing and clearing road right of way.

Approximately 800 linear feet culvert pipe, 12 to 48 inches laid.

All to be done and furnished in accordance with plans and specifications now on file in the office of the Chancery Court Clerk of Humphreys County, at Belzoni, Mississippi. Contract will be awarded to the lowest bidder. Certified check for \$4000 on and by any responsible bank in Mississippi, or in the cities of Memphis, Tenn., St. Louis, Mo., or New Orleans, La., payable to Commissioners Main Separate Road District No. 4, Humphreys County, Miss., required with each sealed bid, to be filed with Chancery Court Clerk, Humphreys County, at Belzoni, Miss.

Additional information may be had upon application to W. J. Price, Engineer, Belzoni, Mississippi.

The Commission reserves the right to reject any and all bids.

THOMAS TURNER,  
J. L. MILLER,  
T. C. PARRISH,  
Commissioners,  
A. B. HUTCHENS,  
Clerk,

Bids close April 1, 1930.

## Maryland Highway Work

DEPARTMENT OF PUBLIC WORKS  
STATE OF MARYLAND  
STATE ROADS COMMISSION

## NOTICE TO CONTRACTORS

Baltimore, Md.

SEALED PROPOSALS for building five sections of State Highway as follows:

Anne Arundel County, Contract No. AA-83-711—Federal Aid Project 138-A68-125—One section of State Highway along the Defense Highway from Camp Parole to Priest Bridge, a distance of 9.92 miles (concrete shoulders).

Cecil County, Contract No. Ce-75-22, Federal Aid Project 206—One section of State Highway from Kerner Ketch to Liberty Grove, a distance of 3.04 miles (concrete).

Montgomery County, Contract No. M-145-52, Federal Aid Project 216—One section of State Highway along the Laytonsville-Olney Road from the end of Contract No. M-67 to the beginning of Contract No. M-101, a distance of 2.47 miles (concrete).

Prince George's County, Contract No. P-101-85—One section of State Highway from the end of Contract No. P-69, near Croome, to Naylor, a distance of 4.2 miles (gravel).

Worcester County, Contract No. Wo-73-14—One section of State Highway along the Pocomoke-Cedar Hall Road from the end of Contract No. Wo-63 toward Cedar Hall, a distance of 0.99 mile (concrete with slag shoulders).

will be received by the State Roads Commission at its offices, Federal Reserve Bank Building, Calvert and Lexington Streets, Baltimore, Maryland, until 12 M. on the 1st day of April, 1930, at which time and place they will be publicly opened and read.

Bids must be made upon the blank proposal form which, with specifications and plans, will be furnished by the Commission upon application and cash payment of \$1.00, as hereafter no charges will be permitted.

No bids will be received unless accompanied by a certified check for the sum of Five Hundred (\$500) Dollars, payable to the State Roads Commission.

The successful bidder will be required to give bond and comply with the Acts of the General Assembly of Maryland respecting contracts.

The Commission reserves the right to reject any and all bids.

BY ORDER of the State Roads Commission this 18th day of March, 1930.

G. CLINTON UHL, Chairman.  
L. H. STEUART, Secretary.

Bids close April 15, 1930.

## Delaware Highway Work

Dover, Del.

Sealed proposals will be received by the State Highway Department at its office, Dover, Delaware, until 2:00 o'clock P. M., April 15, 1930, and at that place and time publicly opened for contracts involving the following approximate quantities:

CONTRACT 145  
SELBYVILLE-GEORGETOWN (WIDENING) 18.9 MILES  
4 Acres Clearing  
4 Acres Grubbing  
17000 Cu. Yds. Excavation  
6000 Cu. Yds. Borrow  
11300 Cu. Yds. Cement Concrete Pavement  
4500 Lin. Ft. Premoulded Bituminous Expansion Joint  
3800 Tons Amiesite Asphalt Surface Course  
1000 Tons of Waterbound Macadam Surface Course  
425 Cu. Yds. Class A Concrete  
20000 Lbs. Reinforcement  
168 Lin. Ft. 12 In. Cast Iron Pipe  
150 Lin. Ft. 18 In. Cast Iron Pipe  
12 Lin. Ft. 20 In. Cast Iron Pipe  
400 Lin. Ft. 15 In. Corr. Metal Pipe  
4600 Lin. Ft. Wire Cable Guard Rail  
8000 Lin. Ft. Wood Shoulder Curb  
1200 Lin. Ft. Timber Piling

CONTRACT 147  
NEWARK-MARYLAND LINE, 1.50 MILES  
9000 Cu. Yds. Excavation  
200 Cu. Yds. Borrow  
200 Cu. Yds. Rock Excavation  
150 Tons Broken Stone Base Course  
3350 Cu. Yds. Cement Concrete Pavement  
7750 Lin. Ft. Longitudinal Metal Joint  
OR 7750 Lin. Ft. Longitudinal Joint (non-metallic)  
1600 Lin. Ft. Premoulded Bituminous Expansion Joint  
480 Cu. Yds. Class "A" Concrete  
17000 Lbs. Reinforcement  
200 Lin. Ft. 15 In. Corr. Metal Pipe  
140 Lin. Ft. 18 In. Corr. Metal Pipe  
96 Lin. Ft. 15 In. Reinforced Concrete Pipe  
32 Lin. Ft. 24 In. Reinforced Concrete Pipe  
32 Lin. Ft. 30 In. Reinforced Concrete Pipe  
600 Lin. Ft. 4 In. Pipe Underdrain  
1000 Sq. Yds. Class A Concrete Gutter  
500 Lin. Ft. Wire Cable Guard Rail  
1000 Lin. Ft. Wood Shoulder Curb

CONTRACT 149  
MIDDLETON-MT. PLEASANT AND FROGTOWN CROSSING CUTOFF, 5.12 MILES  
11000 Cu. Yds. Excavation  
19000 Cu. Yds. Borrow  
3800 Tons Broken Stone Base Course  
6500 Cu. Yds. Cement Concrete Pavement  
5200 Lin. Ft. Longitudinal Metal Joint  
OR 5200 Lin. Ft. Longitudinal Joint (non-metallic)  
3600 Lin. Ft. Premoulded Bituminous Expansion Joint  
4200 Tons Amiesite Asphalt Surface Course  
235 Cu. Yds. Class A Concrete  
9500 Lbs. Reinforcement  
4 Lin. Ft. 10 In. Cast Iron Pipe  
84 Lin. Ft. 15 In. Cast Iron Pipe  
36 Lin. Ft. 18 In. Cast Iron Pipe  
4 Lin. Ft. 24 In. Cast Iron Pipe  
600 Lin. Ft. 15 In. Corr. Metal Pipe  
190 Lin. Ft. 15 In. Reinforced Concrete Pipe  
200 Lin. Ft. Relaid Pipe  
600 Lin. Ft. 4 In. Pipe Underdrain  
1700 Lin. Ft. Wire Cable Guard Rail  
3500 Lin. Ft. Wood Shoulder Curb

CONTRACT 151  
COUNTY FARM-SHORTLY, 4.791 MILES  
4½ Acres Clearing  
6 Acres Grubbing  
13500 Cu. Yds. Excavation  
6000 Cu. Yds. Borrow  
4900 Cu. Yds. Cement Concrete Pavement  
2600 Lin. Ft. Premoulded Bituminous Expansion Joint  
230 Cu. Yds. Class A Concrete  
11000 Lbs. Reinforcement  
440 Lin. Ft. 15 In. Corr. Metal Pipe  
240 Lin. Ft. 15 In. Reinforced Concrete Pipe  
150 Lin. Ft. 18 In. Reinforced Concrete Pipe  
60 Lin. Ft. 24 In. Reinforced Concrete Pipe

90 Lin. Ft. 30 In. Reinforced Concrete Pipe  
36 Lin. Ft. 36 In. Reinforced Concrete Pipe  
4000 Lin. Ft. Wood Shoulder Curb  
500 Lin. Ft. Timber Piling

CONTRACT 154  
CLAYTON-DELANEY, 5.40 MILES  
1 Acre Clearing  
1 Acre Grubbing  
18000 Cu. Yds. Excavation  
5000 Cu. Yds. Borrow  
200 Tons of Broken Stone Base Course  
6250 Cu. Yds. Cement Concrete Pavement  
4520 Lin. Ft. Longitudinal Metal Joint  
OR 4520 Lin. Ft. Longitudinal Joint (Non-Metallic)  
3300 Lin. Ft. Premoulded Bituminous Expansion Joint  
200 Cu. Yds. Class "A" Concrete  
8500 Lbs. Reinforcement  
900 Lin. Ft. 15 In. Corr. Metal Pipe  
300 Lin. Ft. 4 In. T. C. Pipe  
200 Lin. Ft. 6 In. T. C. Pipe  
50 Lin. Ft. 15 In. R. C. Pipe  
90 Lin. Ft. 18 In. R. C. Pipe  
60 Lin. Ft. 24 In. R. C. Pipe  
30 Lin. Ft. 30 In. R. C. Pipe  
36 Lin. Ft. 33 In. R. C. Pipe  
600 Lin. Ft. Wire Cable Guard Rail  
3000 Lin. Ft. Wood Shoulder Curb  
9 Thousand Ft. B. M. Creo. Timber

CONTRACT 161  
PLANTING—DUAL HIGHWAY, ST. GEORGES TO STATE ROAD—  
½ MILE

CONTRACT "T"  
1 HEAVY DUTY TRAILER

Performance of contract shall commence within ten (10) days after execution of the contract and be completed as specified.

Monthly payments will be made for 90 per cent of the construction completed each month.

Bidders must submit proposals upon forms provided by the Department.

Each proposal must be accompanied by a surety bond, certified check or money to the amount of at least ten (10) per centum of the total amount of the proposal.

The envelope containing the proposal must be marked "Proposal for the Construction of State Highway Contract No. ...."

The contract will be awarded or rejected within twenty (20) days from the date of opening proposals.

The right is reserved to reject any or all bids.

Complete sets of plans and specifications may be obtained upon receipt of two dollars (\$2.00) for each contract, which amount will not be refunded.

## STATE HIGHWAY DEPARTMENT.

Bids close April 8, 1930.

Maryland Highway Work  
DEPARTMENT OF PUBLIC WORKS  
STATE OF MARYLAND  
STATE ROADS COMMISSION

## NOTICE TO CONTRACTORS

Baltimore, Md.

SEALED PROPOSALS for fabricating and erecting Superstructure as follows:

Baltimore County, Contract No. B-137-43—Fabrication and erection of all structural steel necessary for the superstructure of the proposed steel girder bridge over the tracks of the Pennsylvania Railroad Company at Parkton, Maryland.

will be received by the State Roads Commission at its offices, Federal Reserve Bank Building, Calvert and Lexington Streets, Baltimore, Maryland, until 12 M. on the 8th day of April, 1930, at which time and place they will be publicly opened and read.

Bids must be made upon the blank proposal form which, with specifications and plans, will be furnished by the Commission upon application and cash payment of \$1.00, as hereafter no charges will be permitted.

No bids will be received unless accompanied by a certified check for the sum of Five Hundred (\$500) Dollars, payable to the State Roads Commission.

The successful bidder will be required to give bond and comply with the Acts of the General Assembly of Maryland respecting contracts.

The Commission reserves the right to reject any and all bids.

BY ORDER of the State Roads Commission this 19th day of March, 1930.

G. CLINTON UHL, Chairman.  
L. H. STEUART, Secretary.

Bids close May 13, 1930.

**Louisiana Highway Work**  
**POSTPONEMENT DATE RECEIVE BIDS**

Baton Rouge, La.

Notice is hereby given by the Louisiana Highway Commission, Louisiana National Bank Building, Baton Rouge, Louisiana, that the date for receiving bids for construction of the Projects listed below has been postponed from 11:00 A. M., Tuesday April 1, 1930, to

11:00 A. M., TUESDAY, MAY 13, 1930.  
**PROJECT NO. 1001, CROWLEY-DUSON HIGHWAY**, Acadia and Lafayette Parishes, Route No. 2, Length 14.0 miles. Concrete Pavement.

**PROJECT NO. 6003, MORGAN CITY-BAYOU BOUEF HIGHWAY**, Located in St. Mary Parish, Route No. 2, Length 7.0 miles. Concrete Pavement.

**HARRY B. HENDERLITE,**  
 State Highway Engineer.  
**O. K. ALLEN**, Chairman,  
 Louisiana Highway Commission.

Bids close April 2, 1930.

**Power Plant Equipment**

Wilson, N. C.

Sealed proposals will be received by the Mayor and Board of Commissioners of the Town of Wilson, N. C., until 2:30 P. M., April 2nd, 1930, for furnishing, delivering and/or erecting the Power Plant equipment enumerated as follows:

One (1)—5,000 K.W. Turbo-Generator unit with direct connected exciter,

**PROPOSALS**

Generator Air Cooler and appurtenances.

One (1)—Generator Switchboard Panel with instruments and appurtenant equipment.

One (1)—Exciter Switchboard Panel with instruments and appurtenant equipment.

One (1)—Feeder Panel with instruments and appurtenant equipment.

Changes and Modifications to present switchboard, etc.

One (1)—Surface Condenser for service with the 5,000 K.W. Turbo-Generator Unit, complete with duplicate dry vacuum pumps; Motor and Turbine-driven Hot Well Pumps; Inter and After condensers; Motor-driven Circulating Water Pump and other appurtenant equipment.

One (1) or, possibly, two (2) approximately 900 H.P. Cross Drum, Forged Steel Sectional Header Boiler or Boilers with appurtenant equipment and steel plate smoke flue.

One (1) or, possibly, two (2) brick settings for the boiler or boilers.

One (1) or, possibly, two (2) Underfeed Mechanical Stokers for service under the 900 H.P. Boiler or Boilers, and appurtenant equipment.

Two (2)—Boiler Feed Pumps.

One (1)—Boiler Feed Water Heater.

One (1) or, possibly, two (2) superheaters for service in the 900 H.P. Boiler or Boilers, and the following miscellaneous equipment:

Soot Blowers; Boiler Feed Water Regulators; Automatic Damper Controls; Boiler Meters; Ash Hoppers and Steel Plate Air Duct.

Proposals MUST be made upon the blank forms provided in, and forming a part of the Proposal, Specifications and Contract Forms; and be delivered in a sealed envelope plainly marked, "PROPOSALS FOR POWER PLANT EQUIPMENT," and addressed to the Mayor and Board of Commissioners of the Town of Wilson, N. C., with name of bidder also plainly written on the envelope and items bid on.

Each bid must be accompanied by a certified check in the amount of five (5) per cent of the total amount of the bid or bids, but in no case for a less amount than two hundred fifty (250) dollars, as evidence of good faith.

Forms including proposal blanks, specifications, form of contracts, bond, etc., may be obtained upon application to the Engineers.

The right is reserved to reject any or all bids or to award contract or contracts which, in the opinion of the Engineers and the Board, appear to be for the best interest of the Town.

**CHARLES B. McLEAN**, Mayor,  
**T. J. HACKNEY**, Chairman,  
 Water and Light Committee  
**THEO. A. HINNANT**, Town Clerk,  
**R. J. GRANTHAM**, Supt.,  
 Public Utilities  
**WILLIAM C. OLSEN, INC.**,  
 Engineers,  
 Raleigh, North Carolina.

**CLASSIFIED OPPORTUNITIES**

**MINERAL AND TIMBER LANDS, WATER POWER, MISCELLANEOUS PROPERTIES**

**FOR SALE**, or capitalize, gold, talc, blue and white, copper, 753 acres, kaolin, mica, marble, iron, 10% manganese on top.  
 W. A. OWENBY, Mineral Bluff, Ga.

**WANT TO SELL**—Part mineral rights in geological structure leased by a Standard Oil Company to drill. Address 412 Phillips, Tulsa, Okla.

**LIMESTONE DEPOSIT**  
**FOR SALE**

Limestone deposit, unlimited tonnage, near Hawkinsville, Ga.  
 ROBERT S. ANDERSON, Hawkinsville, Ga.

**ROCK ASPHALT PROPERTY**

**FOR SALE**—Rock-asphalt property, containing both limestone and sandstone rock-asphalts; 4000 acres, with large "going" plant, quarries and railroads. Exceptionally located for distribution in East and South. Material thoroughly tested in highway use. For particulars address No. 8059, care of Manufacturers Record, Baltimore, Md.

**COAL LANDS**

**FOR SALE**—1400 acres of coal land on railroad, with good titles, in Eastern Kentucky Hazard fields. Plenty of timber for mining purposes. Cheap if sold at once; and several more good tracts of various sizes. Write J. W. HEVNER, Waynesburg, Ky.

**PULPWOOD**

**30,000 ACRES PULPWOOD**  
 Vermont. Can add 30,000 acres more.  
 W. T. KIME,  
 200 W. 4th St., Kansas City, Mo.

**TIMBER AND TIMBER LAND**

900,000,000 feet tropical fancy hardwoods including about 125,000,000 feet genuine Mahogany (*Swietenia*) all one tract; average less than \$1.00 per thousand. Economical logging, stable Governmental conditions; equable climate; advantageous rates and shipping facilities to the states. Offered for sale first time. Excellent opportunity for investment or long timber supply. Title perfect. Address, No. 8068 care Manufacturers Record, Baltimore, Md.

**Rates, Terms and Conditions**

**RATES:** 80 cents a line each insertion. Minimum space accepted, four lines. In estimating the cost allow six or seven words of ordinary length to a line. When the advertisement contains a number of long words proper allowance should be made.

**Rates for Special Contract:**  
 100 lines 280 a line  
 300 lines 260 a line  
 500 lines or more 250 a line

**TERMS:** For transient advertising cash with order; check, postoffice or express money order or stamps accepted.

On special contract advertising bills are rendered monthly, covering space used each month, payable within ten days.

**CONDITIONS:** No patent medicine, oil or mining stock advertisements or questionable or undesirable advertisements will be accepted. The assistance of our readers in excluding undesirable advertisements is requested. No display type used.

**MINERAL AND TIMBER LANDS, WATER POWER, MISCELLANEOUS PROPERTIES**

**TIMBER AND TIMBER LAND**

**FOR SALE**—Approx. four million feet virgin hardwood timber; short haul to B. & O., near Piedmont, W. Va. Address Box 355, Mt. Lake Park, Maryland.

**FARM, FRUIT AND TRUCK LANDS**

**FLORIDA**

**SACRIFICE SALE**—20 acres, with 50 bearing fruit trees, many palms and shrubs, about 800 ft. beautiful river frontage; has seawall and pier. Lodge built home. P. JOHN HART REALTY & INV. CORP., Room No. 6, P. O. Arcade, Fort Myers, Fla.

**FARM, FRUIT AND TRUCK LANDS**

**LOUISIANA**

**FOR SALE**—1300 acres within twelve miles Baton Rouge Standard Oil Refinery. One mile frontage Mississippi River deep water. Good farming land; mineral possibilities. Brick residence, gravel highway, trunk line R. R., above overflow; Cattle tick free: \$25.00 per acre.

**TOM DUTTON**, Baton Rouge, La.

**TEXAS**

**RIO GRANDE VALLEY, TEXAS**  
 300 acres citrus land, located northwest of Mission, where developers are selling same soil for \$1000 to \$1500 per acre; will sell 100 acres for \$80 or all for \$75 per acre; half cash, balance to suit; \$500 to anyone who can show better citrus soil, regardless of price or location. JOHN J. ERICKSON, owner, Box 412, McAllen, Tex.

**VIRGINIA**

**RIVER FARM FOR SALE OF EXCHANGE**—750 acres, brick mansion, two stock barns, several tenant houses, 125 acres rich bottom land 325 acres fine upland, 300 acres timber. Good neighborhood. Low price.

**GEO. V. VENABLE & CO.**, Lynchburg, Va.

**HUNTING AND FISHING PRESERVE**

**9000 ACRES** famous Yazoo Delta (Miss.) Three miles station, National Highway 61. Lots timber, richest soil, sportsmen's paradise, deer, bear, squirrel, coon, trout, duck. Also potential oil-gas. Extra investment, \$7.50 acre. Terms. Barbour, Box 485, Vicksburg, Miss.

**SOUTHERN HOME**

**SOUTHERN HOMES**

in the best city in the Carolinas, \$10,000 to \$75,000, according to size and location.

**F. C. ABBOTT & CO.**,  
 Charlotte, N. C.  
 32 years in Charlotte Real Estate.

## PUBLIC UTILITIES WANTED

WE ARE INTERESTED in purchasing additional electric, water and gas utilities, either privately or municipally owned. Prefer these located in North and South Carolina, or certainly in the Southeastern States. Address Box 1288, Charlotte, N. C.

## BUSINESS AND INVESTMENT PROPERTIES

FOR SALE—Factory sites, city property and large tracts suitable for subdividing. STRINGER REALTY CO., Gadsden, Ala.

GADSDEN, ALABAMA, offers wonderful investment possibilities to the conservative buyer of well-located real estate. Gulf States Steel Co. spending twenty million dollars. Southern plant Goodyear Tire Co.; 20 other textile, cast-iron pipe, woodworking and stove industries. Offers same opportunity Birmingham did twenty years ago. For homes, income, industrial properties or business enterprises write FISHER REALTY COMPANY, GADSDEN, ALABAMA.

## BUSINESS OPPORTUNITIES

LONG TERM LOANS, large amounts, made on industrial, mercantile, sawmill properties. THOS. W. GILMER, Attorney, Bay Minette, Alabama.

FOR SALE—A going coal yard, centrally located, in Norfolk, Virginia. Good chances for right kind of manager. Address No. 8077, care Manufacturers Record, Baltimore.

WANTED—PARTNER with \$500 to patent and develop combination cigarette magazine case and lighter; automatic in operation. Pocket size; convenient, popular and will be money maker. BOX 1028, MONROE, LOUISIANA.

MANUFACTURERS—Write for our FREE Classification Sheets of inventions for sale, covering 135 main subjects, and in one or more of which you will doubtless be interested. ADAM FISHER MFG. CO., 378 Enright, St. Louis, Mo.

WANTED—A MACHINE manufactured that will sell for territory manufacturing and selling right; weight of machine and vital auxiliary equipment about 7 tons, 5 of gray iron castings, none over 300 lbs., and 2 of structural steel, etc. For further details write No. 8069, care Manufacturers Record, Baltimore, Md.

FOR SALE—One-half interest in brick plant. Good proposition to one who can take complete charge. Over 600 acres of good material, clay, coal and shale. Good colors. Now making backups. On two railroads; inside shifting limits; one-half mile from town. Good domestic coal trade. Write H. D. CUSICK, New Comerstown, Ohio.

LUMBER AND FURNITURE MANUFACTURING OFFERS OPPORTUNITY WITH FUTURE.

As equal, silent or active partner, with young man who owns at Virginia shipping station twenty million feet Oak and Chestnut timber, in manufacturing same into furniture and building materials, requiring \$50,000 investment, amply secured by timber and realty. P. MAC, Box 14, Point Pleasant, Pa.

THE OWNER of a long established and most successful manufacturing plant, which consists of 50 acres, just outside of the city limits of a flourishing Southern city which has a very low tax rate, will sell a half interest or will sell out entirely.

This plant manufactures a full line of marble-making and mining machinery and is adapted to the introduction of any additional line of iron and steel manufacture. Can make castings up to 20 tons.

Address No. 8028  
Care Manufacturers Record  
Baltimore, Md.

## GAS PRODUCER

MAKE GAS at a cost defying all competition. Burn coke or charcoal. No. 10 size, weight 550 lbs., consuming from 2 to 40 lbs. of fuel per hour, price \$290. Individual service. No attendant required. Portable for camps or contractors. Size in capacities range to 12,000 cu. ft. gas per hour. Representatives wanted. THE GAS-O-FLAME STOVE WORKS, Port Deposit, Md.

## FINANCIAL

MONEY WANTED  
6, 7 and 8% Mortgage Loans on City, Town or Country property. Southern Land & Investment Co., Baton Rouge, Louisiana.

## INDUSTRIAL SURVEYS

ENGINEERING REPORTS on resources of cities and towns. Recommendations for industrial development and zoning made by specialists in locating industries.

TECHNICAL SERVICE CO., Woolworth Building New York City

## DEVELOPING AND ENGINEERING

## ORGANIZING—DEVELOPING—ENGINEERING

Engineering firm, widely experienced in investigating, organizing, developing, designing and supervising construction, solicit correspondence regarding development or extension of meritorious projects and existing industries, power plants and utilities. Address No. 8016, care Manufacturers Record.

## INDUSTRIES WANTED

COME to central SANFORD and LIVE. Health, business, recreation, floriculture, homes.

FRIENDSHIP CLUB, SANFORD, N. C.

## INDUSTRIAL PLANTS

RARE OPPORTUNITY  
BALTIMORE, MD.

On main line Pennsylvania Railroad between Baltimore and Washington. Plot 8.6 acres. R. R. siding 915 feet in length. Concrete yard, with underground drainage; 5 well-constructed buildings, 14 individual garages. Very low taxes—and this is only 20 minutes' run by automobile from the center of Baltimore. B. HOWARD RICHARDS, 1109 Lexington Building, Baltimore, Md.

## FACTORY BUILDINGS

FOR RENT—Centrally located 2 story building, 3250 square feet floor space. Suitable manufacturing or wholesale. Elevator. Railway siding in rear. W. C. CASEY, 408 Times Bldg., Chattanooga, Tenn.

## FACTORY SITES

FACTORY OR WAREHOUSE SITE on Pennsylvania Railroad, within city limits of BALTIMORE, MARYLAND, 185 ft. x 328 ft., facing on two streets and railroad. Price reasonable. Mortgage arranged if desired. B. HOWARD RICHARDS, 1109 Lexington Building, Baltimore, Md.

PLANT SITE AND TOWN  
Excellent plant location, southeast Georgia, on main line Central of Georgia. Village of fifty houses, with clubhouse, adjoining good, small town. Deep well, elevated water tank, pump and water lines installed. Ample labor available for textiles, metal working, wood working, paper mill, clay and ceramics or other industries. Plant site 150 acres, with switch tracks installed. Office building and general equipment available.

NASHVILLE INDUSTRIAL CORPORATION,  
OLD HICKORY, TENNESSEE.

## PATENTS FOR SALE

NEW RAILROAD PATENT—Standard car equipment which is constantly replaced. Railroads admit one in use not satisfactory. Save railroads thousands of dollars each year. Patented both United States and Canada. Will make right party or company immense fortune. For particulars address "PATENT" P. O. Box 1092, Station A, Chattanooga, Tennessee.

## PATENT ATTORNEYS

FREE "PATENT PARTICULARS" Sterling Buck, over 23 years Registered Patent Attorney. Prompt and thorough services. Suite M 629 F, Washington, D. C.

PATENTS—Booklet free. Highest references. Best results. Promptness assured. WATSON E. COLEMAN, Patent Lawyer, 724 Ninth St., N. W., Washington, D. C.

PATENTS—TRADEMARKS—COPYRIGHTS Charlotte office convenient to South. PAUL B. EATON, Registered Patent Attorney, 218 Johnson Building, Charlotte, N. C., and 314 McLachlen Building, Washington, D. C.

SEYMOUR & BRIGHT, Registered Patent Attorneys. Established 1876. PATENTS, TRADEMARKS, COPYRIGHTS. Prompt and thorough service. Suite 600-4, Barrister Building, Washington, D. C.

EDWARD C. SASNETT, Atty. at Law, formerly a Principal Examiner in the U. S. Patent Office. I offer to inventors and manufacturers a strictly personal service based on twenty years' experience in patent work. McGill Building, Washington, D. C.

## REPRESENTATIVES WANTED

WANTED—Reliable spare time workers, commission basis, for very remunerative introductory assistance in making local machine sales, etc. PAULY MFG. CO., 1333 K Northwest, Washington, D. C.

## AGENCIES WANTED

AN ESTABLISHED and financially responsible sales representative with New York office and warehouse, covering Metropolitan, Eastern Pennsylvania and New England territory, now open for connection with one or two reputable plants. Interested in any staple products which can compete in this territory. Address No. 8067, care Manufacturers Record.

SALES AGENCY desires products sold to the building industry through architects and engineers. Our organization has a large acquaintance in the thirteen northeastern counties surrounding Cleveland. We will put up high-class sales effort against the agency of a high-class product. Address No. 8070, care Manufacturers Record.

## SITUATIONS WANTED

EXECUTIVE with special training and wide experience in handling purchases and supplies would like to locate. Familiar with up-to-date office methods. Address No. 8072, care Manufacturers Record, Baltimore.

## COTTON CLASSE

Extensive experience for many years in handling both Western and Eastern cotton. Excellent references; U. S. Certified cotton classes, South preferred. Address No. 8076, care Manufacturers Record, Baltimore, Md.

## MEN WANTED

AN OPPORTUNITY  
An established Consulting Engineer with growing clientele desires an associate capable of designing industrial plants, making equipment layouts, and maintaining relations with clients. Address No. 8075, care Manufacturers Record.

IF YOU ARE OPEN to overtures for new connection and qualified for a salary between \$2500 and \$25,000, your response to this announcement is invited. The undersigned provides a thoroughly organized service, of recognized standards and reputation, through which preliminaries are negotiated confidentially for positions of the caliber indicated. The procedure is individualized to each client's personal requirements, your identity covered and present position protected. Established twenty years. Send only name and address for details.

R. W. BIXBY, INC.,  
103 Downtown Bldg., Buffalo, New York

## MACHINERY AND SUPPLIES

WHAT DO YOU NEED?  
Wire or write for FREE copy of Machree Want List. America's best bargains "arranged so you can understand them."

MACHINERY RECORD, Richmond, Va.



# SPECIAL ADVERTISEMENTS OF GENERAL INTEREST

## DIXIE BAUXITE COMPANY Incorporated

SWEET HOME, ARKANSAS

### BAUXITE ORE

For All Requirements

Crude, Dryed, and Calcined Bauxite

Abrasive Ore dryed or calcined, Chemical Ore dryed, Water Purification Ore dryed. Very attractive price on extra High Grade Crude Ore.

Just acquired additional large acreage bauxite bearing lands. Five years in the Bauxite Producing business. In it to stay. Pioneers in deep mining for bauxite and at the present time the only Company in the world using vertical shaft and the caving system.

#### HOME REFERENCE:

Union Trust Company, Little Rock, Ark.

We sell strictly on guaranteed specifications. Quality, quantity, and prompt shipments guaranteed.

## Factory and Warehouse Sites

AT  
**ATLANTA**  
**For Sale or Lease**  
For Manufacturing or Warehouse Purposes Only  
ON

### Central of Georgia Railway

Extending from East Point to Inman, Georgia

Atlanta Rates	Regular Switching
Good Labor Supply	Service
Electric Power	Street Car Service
Water Supply	Suburban Trains
Electric Lights	Paved Roads
Sewerage	

Write for Copy of

*"The Natural Advantages of the Atlanta Industrial District"*

**R. R. OTIS, Agent**

Arcade Building

ATLANTA - GEORGIA



## RESALE DEPARTMENT

MACHINERY

EQUIPMENT

SUPPLIES

**100 H. P. MOTORS**  
4—General Electric Company, 100 HP, 900 RPM, 2300 V, 3 phase, 60 cycle Slip Ring motors guaranteed same as new, complete with new control. \$750.00 Each f.o.b. Raleigh, N. C. Immediate shipment can be made upon receipt of order.

**ELECTRICAL EQUIPMENT CO.**  
408-410 W. Davie St. Raleigh, N. C.

**FOR SALE**  
3—100 KVA—GE 2300 to 575 Volt Transformers. \$900.00.  
2—150 H.P. Westinghouse 550 Volt 720 RPM—Slip Ring Motors, complete with pulley base and starting equipment. \$600.00 each.  
1—125 H.P. Ditto. \$550.00.  
1—100 H.P. Ditto—\$500.00.

**JONES ELECTRIC REPAIR COMPANY**  
Charlotte, N. C.

**WATER PLANT EQUIPMENT  
FOR SALE**  
Two Babcock & Wilcox Boilers, 105 H.P., new tubes, grates, etc. Pumps, Air Compressors, etc. Used Plant being dismantled.

**CITY OF BRADENTON**  
Public Works Dept. Bradenton Florida

### Get Rid of THAT MACHINERY

That is stored away and for which you have no further use. It may just fit somebody's need.

and make your  
dollars work

Advertise it in the  
**RESALE DEPARTMENT**  
of the  
**Manufacturers Record**  
*Rates on Request*

### WANTED

To trade Model 208 P & H Drag Line for complete Bucyrus Shovel attachment to fit a Model 50 B (Serial Number 22390) Diesel Machine. Will also consider purchase of above shovel attachment if price is attractive. Address

**Everglades Construction Corp.**  
HIALEAH, FLA.

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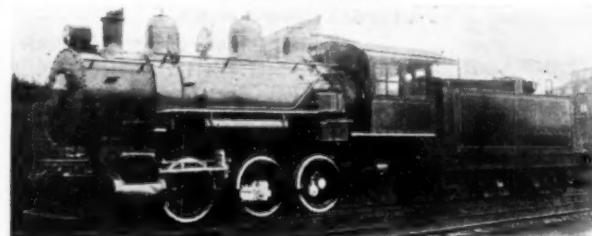
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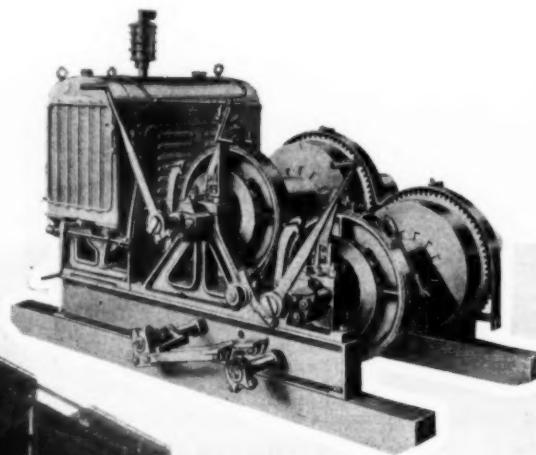


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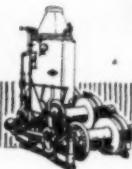
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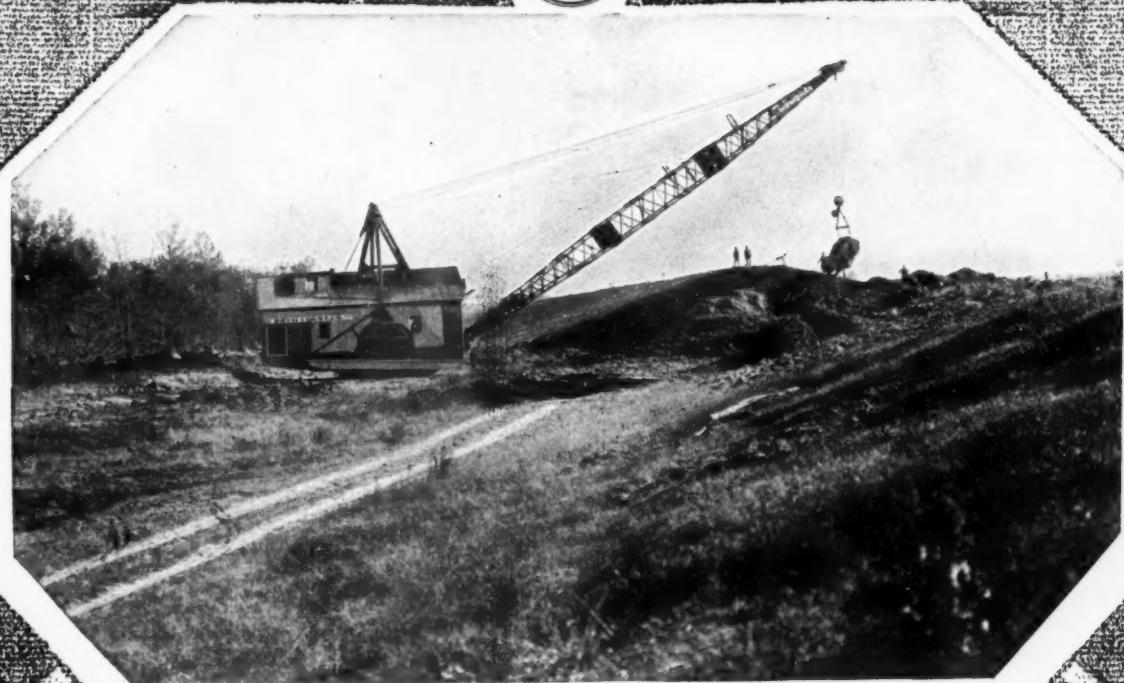


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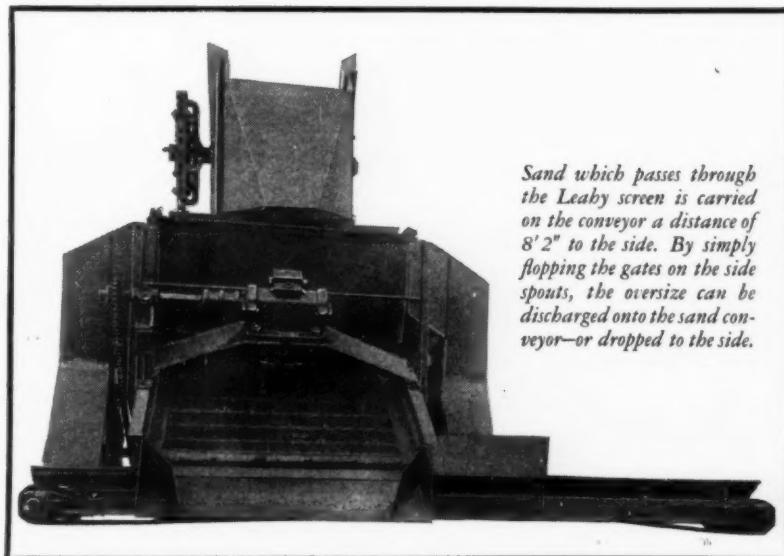
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The World's lowest cost long-range excavator.  
Made in 15 sizes to handle from 10 to 600 tons per hour.

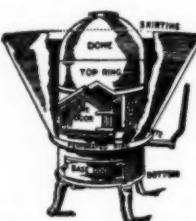
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Bank Building Concrete Paving

**WASHED GRAVEL**  
In Car, Scow and Barge Lots

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Office, PIER 2, PRATT STREET  
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**SAND DRYERS**  
(With or without External Gratings)  
A portable machine, daily capacity 5 to 7 tons.



This dryer has a low first cost, is easily and cheaply operated and guaranteed dry sand.

The low cost makes it valuable for companies needing dry sand on two or more jobs at the same time, thereby eliminating the handling cost of one point only.

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**CRUSHED LIMESTONE**  
Best for All Purposes

We manufacture all sizes of stone suitable for all classes of road building and concrete work where only a high-grade limestone is required.

Quarries opened up in 1912.  
Capacity 4000 tons daily.

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**Crushed Stone**  
**Mascot Chatts Roofing Gravel**  
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Manufacturers and Distributors of

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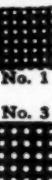
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Stand the Gaff

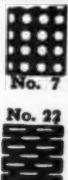
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PERFORATED METAL CO., INC.  
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Write for Copper, Brass, Tin, Zinc or  
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No. 22

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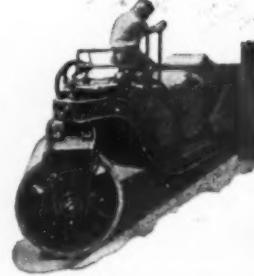
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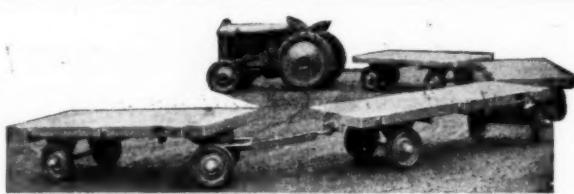
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EWC TRAILERS are made for every industrial hauling purpose. Special trucks and trailers designed and built for individual requirements. TRUCKS and WHEELS for mounting portable machinery of all kinds, any size and capacity. TELL US your hauling problem and let us suggest the equipment for it.

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*"The Plate with Perfect Diamonds"*

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**THIS FLOOR  
PLATE—**

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NON-SKID  
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offer the most efficient anti-slip surface ever produced in steel plate form.

*Send for detailed information and sample.*

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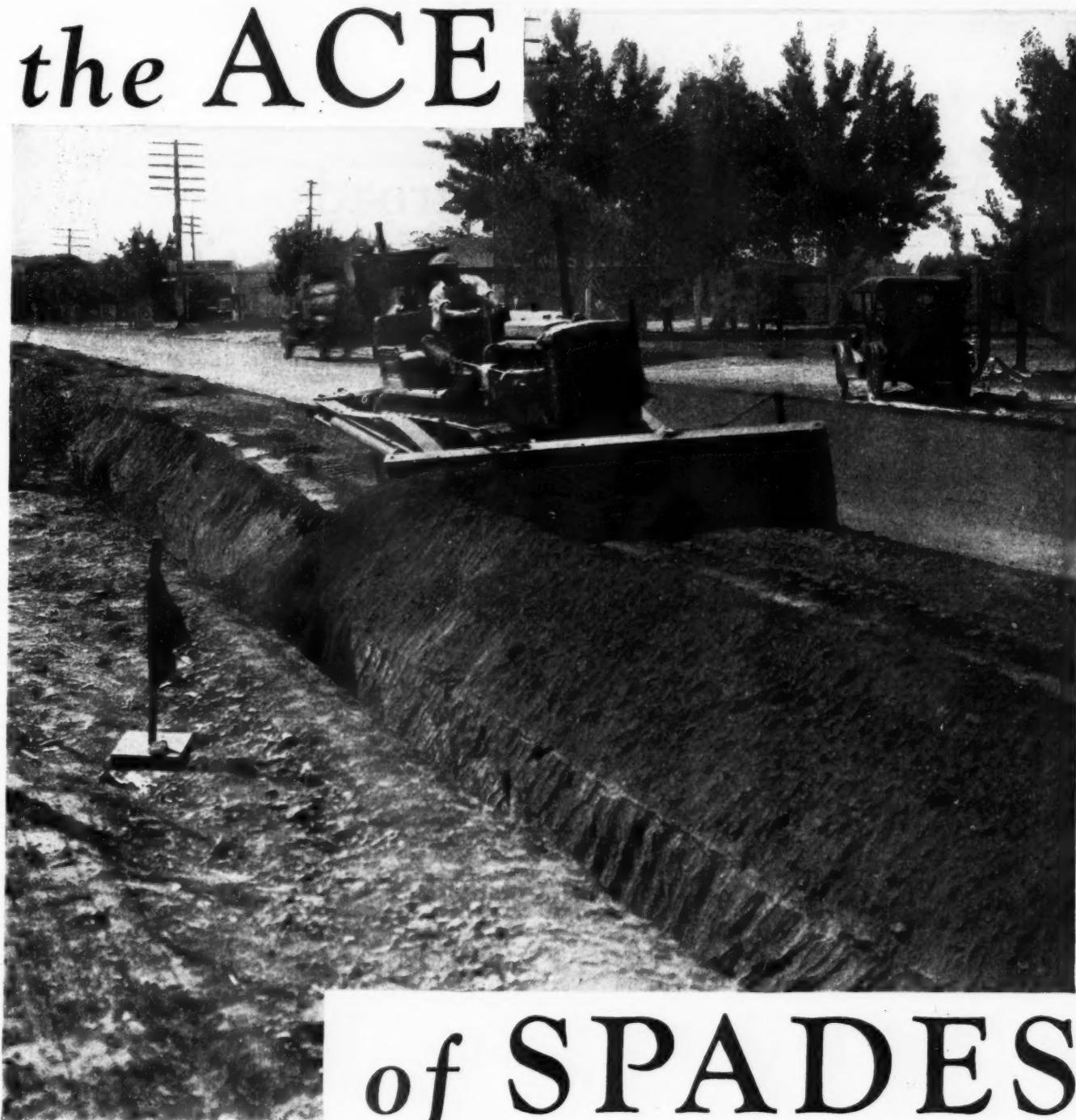
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OFF.**

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Prices—*f. o. b. Peoria, Illinois*

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SIXTY . . .	\$4175		

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Track-type Tractors Combines Road Machinery  
(*There's a "Caterpillar" Dealer Near You*)

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*Present railroad mileage in Alabama (miles of line, not miles of track) is as follows:*

Short Lines.....	578 miles
Trunk Lines.....	4886 miles
Total .....	5464 miles

WITHIN the past two years railroad mileage in Alabama has been substantially increased. The state is now served by twelve standard lines, whose average mileage of roads operated within the state is 4,921.39. Twenty-two secondary lines have an average mileage of roads operated, totalling 789.29. The total of these two figures, 5,711.68, represents the mileage of railway operation in Alabama . . . . From the last figures prepared, the standard lines hauled 60,903,450 tons of revenue freight and 819,246 tons of non-revenue freight, or a total of 69,095,946

tons over a period of one year. Secondary lines hauled 2,768,291 tons of revenue freight and 55,205 tons of non-revenue freight, totalling for both classes 2,823,496. On all lines, a total tonnage of 71,919,-442 tons was hauled, representing tonnage originating both within and without the state.\*

This extensive, active railway system serves 400 Alabama towns which today are offering unparalleled industrial advantages. For detailed information on these towns, write New Industries Division, Alabama Power Company, Birmingham, Ala.

*\*Extract from a comprehensive survey prepared by the Alabama Industrial Development Board. Copies of this survey will be mailed free of charge to executives of responsible enterprises. Address: Alabama Industrial Development Board, Brown-Marx Building, Birmingham, Ala.*

*This advertisement published through the courtesy of the Alabama Power Company, whose New Industries Division is actively cooperating with the Alabama Industrial Development Board in finding profitable locations for new enterprises in Alabama.*

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Le Baron, E. T., Jacksonville, Fla.

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De Laval Steam Turbine Co., Trenton, N. J.

General-Rand Co., New York, N. Y.

Novo Engine Co., Lansing, Mich.

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Swartwout Co., Cleveland, Ohio.

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Aluminum Co. of Amer., Pittsburgh.

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## ANGLE IRON-WORKING MACHINERY.

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Conard & Buzby, Burlington, N. J.

Main, Inc., Chas. T., Boston, Mass.

## ARCHITECTS.

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Lindsey, Cleon H., Jackson, Miss.

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Moore, Co., Tighman, Allentown, Pa.

Prescher & Co., Inc., G. Lloyd, Atlanta.

Sirrine & Co., J. E., Greenville, S. C.

Spiker & Co., W. C., Atlanta, Ga.

Wheeler, Walter H., Minneapolis, Minn.

Widmer Engineering Co., St. Louis, Mo.

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Kirby & Co., Raleigh, N. C.

Miller & Assoc., Wendell F., Columbus, O.

Spoon & Lewis, Greensboro, N. C.

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Virginia Bridge & Iron Co., Roanoke, Va.

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Allen-Sherman-Hoff Co., Phila., Pa.

## —Storage Tanks (Cast Iron.)

Allen-Sherman-Hoff Co., Phila., Pa.

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Shell Petroleum Corp., New Orleans.

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American Limestone Co., Knoxville, Tenn.

Servicised Premoulded Products, Inc., Chicago, Ill.

## —Paving.

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## —(Rock.)

Kentucky Rock Asphalt Co., Louisville, Ky.

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Buckeye Traction Ditcher Co., Findlay, O.

Harnischfeger Corp., Milwaukee, Wis.

Parsons Co., The, Newton, Iowa.

## BALLAST (Railroad.)

American Limestone Co., Knoxville, Tenn.

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Provident Savings Bank & Trust Co.

Cincinnati, Ohio.

Taylor, Wilson & Co., Inc., Cincinnati,

Ohio.

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Bank of New York & Trust Co., N. Y.

Century Trust Co., Baltimore, Md.

Equitable Trust Co., New York, N. Y.

First and Merchants National Bank, Rich-

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Maryland Trust Co., Baltimore, Md.

Mercantile Trust Co., Baltimore, Md.

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Waterloo Constr. Co., Waterloo, Iowa.

## Cutters.

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McClintic-Marshall Co., Pittsburgh, Pa.

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Virginia Bridge & Iron Co., Roanoke, Va.

Youngstown Sheet & Tube Co., Youngs-

town, Ohio.

## —Wire, Wire Fabric, Etc. (For Reinforced Concrete.)

National Steel Fabric Co., Pittsburgh, Pa.

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Electric Storage Battery Co., Phila., Pa.

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Dixie Bauxite Co., Sweet Home, Ark.

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Carnegie Steel Co., Pittsburgh, Pa.

Tennessee Coal, Iron & Railroad Co., Bir-

mingham, Ala.

Virginia Bridge & Iron Co., Roanoke, Va.

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Timken Roller Bearing Co., Canton, Ohio.

## —(Line Shaft.)

Wood's Sons Co., T. B., Chambersburg, Pa.

## —(Roller.)

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Timken Roller Bearing Co., Canton, Ohio.

## —Tubes (Charcoal, Iron.)

Reading Iron Co., Reading, Pa.

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Bethlehem Steel Co., Bethlehem, Pa.

Progressive Mfg. Co., Tarrington, Conn.

Republic Iron & Steel Co., Youngstown,

Ohio.

Russell, Burdsall & Ward Bolt & Nut Co.,

Port Chester, N. Y.

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National Tube Co., Pittsburgh, Pa.

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Owen Buckets Co., The, Cleveland, Ohio.  
Stuebner Iron Works, G. L., Long Island City, N. Y.

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Thompson & Bros., T. C., Charlotte, N. C.  
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Blaw-Knox Co., Pittsburgh, Pa.  
Braden Steel Corp., Tulsa, Okla.  
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Maryland Metal Building Co., Balt., Md.  
McClintic-Marshall Co., Pittsburgh, Pa.  
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Virginia Bridge & Iron Co., Roanoke, Va.

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Butler Mfg. Co., Kansas City, Mo.  
Maryland Metal Building Co., Balt., Md.

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Snare Corp., Frederick, New York, N. Y.

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Trackson Co., Milwaukee, Wis.

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Moccasin Bushing Co., Chattanooga, Tenn.

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Ernst & Ernst, New York, N. Y.

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Angle Steel Stool Co., Plainwell, Mich.

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Okonite Co., New York, N. Y.  
Roebeling's Sons Co., John A., Trenton, N. J.  
Western Electric Co., New York City.

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Broderick & Bascom Rope Co., St. Louis.  
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Solvay Sales Corp., New York City.

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Bliss Co., E. W., Brooklyn, N. Y.  
Robins & Co., A. K., Baltimore, Md.

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Robins & Co., A. K., Baltimore, Md.

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Easton Car & Construction Co., Easton, Pa.  
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**— Steps (Safety.)**  
Irving Iron Works Co., Long Island City, N. Y.

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Columbian Iron Works, Chattanooga, Tenn.  
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Hammond Iron Co., Birmingham, Ala.  
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Roanoke Iron & Bridge Works, Inc., Roanoke, Va.  
Salem Fdry. & Mach. Wks., Salem, Va.  
U. S. Pipe & Foundry Co., Burlington, N. J.

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Morse Chain Co., Ithaca, N. Y.

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Cement Gun Construction Co., Chicago.

Rust Engineering Co., Birmingham, Ala.

**— Floor Slabs.**

American Cement Tile Mfg. Co., Pittsburgh, Pa.

**— Information Only.**

Portland Cement Assn., Chicago, Ill.

**— Mixers.**

Blystone Mfg. Co., Cambridge Springs, Pa.

Chain Belt Co., Milwaukee, Wis.

Dunning & Boschart Press Co., Inc., Syracuse, N. Y.

Jaeger Machine Co., Columbus, Ohio.

Koehring Co., Milwaukee, Wis.

Lansing Co., Lansing, Mich.

**— Pipe Machinery (See Pipe Machinery, Concrete.)**

**— Reinforcing Wire & Wire Fabric.**

National Steel Fabric Co., Pittsburgh, Pa.

**— Road Curving.**

McEverlast, Inc., Los Angeles, Cal.

**— Road Hardeners.**

Solvay Sales Corp., New York City.

**— Road Reinforcing Fabric.**

National Steel Fabric Co., Pittsburgh, Pa.

**— Roofing Tile.**

American Cement Tile Mfg. Co., Pittsburgh, Pa.

**CONDUTS (Electric, Interior, Steel.)**

Western Electric Co., New York City.

Youngstown Sheet & Tube Co., Youngstown, Ohio.

**— (Wood.)**

Meredith Co., William C., Atlanta.

**CONTRACTORS (Airports.)**

Miller & Asso., Wendell P., Chicago.

**— (Bridge.)**

Kansas City Bridge Co., Kansas City, Mo.

Snare Corp., Frederick, New York.

**— (Drainage and Dredging.)**

Arundel Corp., The, Baltimore, Md.

Atlantic Gulf and Pacific Co., New York.

**(Electrical.)**

Industrial Electrical Co., Savannah, Ga.

Walker Electrical Co., Atlanta, Ga.

Webb Electric Co., Anderson, S. C.

**— (Foundations and Dams.)**

Calligan & Co., A. H., Richmond, Va.

Snare Corp., Frederick, New York, N. Y.

**— (General.)**

Angle-Blackford Co., Greensboro, N. C.

Blair, Algernon, Montgomery, Ala.

Charleston Constructors, Inc., Charleston, S. C.

Cornell-Young Co., Inc., Macon, Ga.

Felix, Alvin F., Birmingham, Ala.

Fiske-Carter Constr. Co., Greenville, S. C.

Gridley Constr. Co., Lee A., Knoxville, Tenn.

Saville, Inc., Allen J., Richmond, Va.

Seaboard & Southern Constr. Co., Inc., Jacksonville, Fla.

Snare Corp., Frederick, New York, N. Y.

Stone & Webster, Inc., Boston, Mass.

Thompson & Bros., T. C., Charlotte, N. C.

Tucker & Laxton, Charlotte, N. C.

White Engineering Corp., J. G., New York.

**— (Industrial Buildings.)**

Angle-Blackford Co., Greensboro, N. C.

Barstow & Co., W. S., Reading, Pa.

Blair, Algernon, Montgomery, Ala.

Felix, Alvin F., Birmingham, Ala.

Fiske-Carter Constr. Co., Greenville, S. C.

Seaboard & Southern Constr. Co., Inc., Jacksonville, Fla.

Snare Corp., Frederick, New York, N. Y.

**— (Industrial Railroad Sidings.)**

Felix, Alvin F., Birmingham, Ala.

**— (Mill Village.)**

Hornbuckle Contracting Co., Atlanta, Ga.

**— (Plastering.)**

Gomez & Co., P. L., Atlanta, Ga.

Jennings & Co., Floyd, Atlanta, Ga.

**— (Power Plants.)**

Snare Corp., Frederick, New York, N. Y.

**— (Railroad.)**

Calligan & Co., A. H., Richmond, Va.</

**COPPER AND BRASS.**

Chase Brass & Copper Co., Waterbury, Conn.  
Copper and Brass Research Assn., New York.

**COST SERVICE.**

Le Baron, E. T., Jacksonville, Fla.

**COTTON GIN MACHINERY.**

Continental Gin Co., Birmingham, Ala.  
—**Mill Machinery.**  
Southern Spindle & Flyer Co., Inc., Charlotte, N. C.

**COUNTING APPARATUS.**

Weeder-Roof, Inc., Hartford, Conn.

**COUPLINGS.**

Goldens' Fdy. & Mach. Co., Columbus, Ga.  
—**(Shaft.)**  
Foote Bros. Gear & Machine Co., Chicago.  
Wood's Sons Co., T. B., Chambersburg, Pa.

**CRANES.**

Austin Machinery Corp., Muskegon, Mich.  
Buckeye Traction Ditcher Co., Findlay, O.  
Northwest Engineering Co., Chicago, Ill.  
Ohio Power Shovel Co., Lima, Ohio.  
The Shovel Co., The, Lorain, Ohio.

**—(Crawler.)**

Buckeye Traction Ditcher Co., Findlay, O.  
Harnischfeger Corp., Milwaukee, Wis.  
Northwest Engineering Co., Chicago, Ill.  
Ohio Power Shovel Co., Lima, Ohio.  
The Shovel Co., The, Lorain, Ohio.

**—(Crawling Tractor.)**

Northwest Engineering Co., Chicago, Ill.  
Ohio Power Shovel Co., Lima, Ohio.  
The Shovel Co., The, Lorain, Ohio.

**—(Electric Traveling.)**

Harnischfeger Corp., Milwaukee, Wis.  
Milwaukee Elec. Crane & Hoist Corp., Milwaukee, Wis.

**—(Full Circle Steam and Electric.)**

Austin Machinery Corp., Muskegon, Mich.  
Northwest Engineering Co., Chicago, Ill.  
Ohio Power Shovel Co., Lima, Ohio.  
The Shovel Co., The, Lorain, Ohio.

**—(Gasoline.)**

Buckeye Traction Ditcher Co., Findlay, O.  
Harnischfeger Corp., Milwaukee, Wis.  
Industrial Brownhoist Corp., Cleveland, O.  
Northwest Engineering Co., Chicago, Ill.  
Ohio Power Shovel Co., Lima, Ohio.  
The Shovel Co., The, Lorain, Ohio.

**—(Locomotive.)**

Bucyrus-Erie Co., Erie, Penna.  
Industrial Brownhoist Corp., Cleveland, O.  
Northwest Engineering Co., Chicago, Ill.  
Ohio Power Shovel Co., Lima, Ohio.  
The Shovel Co., The, Lorain, Ohio.

**—(Material Handling.)**

Bay City Shovels, Inc., Bay City, Mich.  
Industrial Brownhoist Corp., Cleveland, O.  
Northwest Engineering Co., Chicago, Ill.  
Ohio Power Shovel Co., Lima, Ohio.  
The Shovel Co., The, Lorain, Ohio.

**—(Portable Floor.)**

Beatty Machine & Mfg. Co., Hammond, Ind.

**—(Traveling, Hand Power.)**

Harrington Co., The, Philadelphia, Pa.

**CRAWLERS (Tractor.)**

Riddell Co., W. A., Bucyrus, Ohio.  
Trackson Co., Milwaukee, Wis.

**CREOSOTED MATERIALS.**

Amer. Creosote Wks., Inc., New Orleans.  
Delaware Wood Preserving Co., Phila.  
Savannah Creosoting Co., Savannah, Ga.

**CREOSOTED TIMBER.**

Ayer & Lord Tie Co., Chicago, Ill.

**CREOSOTED OIL.**

Amer. Creosote Wks., Inc., New Orleans.  
Ayer & Lord Tie Co., Inc., Chicago.

**CREOSOTING (Wood Materials.)**

Amer. Creosote Wks., Inc., New Orleans.  
Amer. Creosoting Co., Inc., Louisville, Ky.  
Delaware Wood Preserving Co., Phila.  
Eppinger & Russell Co., New York, N. Y.  
Gulf States Creos. Co., Hattiesburg, Miss.  
Prettyman & Sons, J. F., Charleston, S. C.  
Savannah Creosoting Co., Savannah, Ga.  
Taylor-Colquitt Co., Spartanburg, S. C.  
Wales Wood-Preserving Co., Norfolk, Va.

**CROSS-ARMS (Creosoted.)**

Amer. Creosote Wks., Inc., New Orleans.  
Amer. Creosoting Co., Inc., Louisville, Ky.  
Savannah Creosoting Co., Savannah, Ga.

**—(Zinc Meta Arsenite Treated.)**

Curtin-Howe Corp., New York, N. Y.

**CROSS-TIES (Creosoted.)**

Amer. Creosote Wks., Inc., New Orleans.  
Amer. Creosoting Co., Inc., Louisville, Ky.  
Ayer & Lord Tie Co., Inc., Chicago.  
Eppinger & Russell Co., New York, N. Y.  
Prettyman & Sons, J. F., Charleston, S. C.  
Savannah Creosoting Co., Inc., Savannah, Ga.  
Taylor-Colquitt Co., Spartanburg, S. C.

**—(Zinc Meta Arsenite Treated.)**

Curtin-Howe Corp., New York, N. Y.

**CRUSHED STONE (Road Concrete and Ballast.)**

American Limestone Co., Knoxville, Tenn.  
Boxley & Co., W. W., Roanoke, Va.

**CRUSHERS (Coal and Coke.)**

Fuller Lehigh Co., Fullerton, Pa.

**—Rock.**

Universal Crusher Co., Cedar Rapids, Iowa.  
W-K-M Co., Inc., Houston, Texas.

**CRUSHING and Pulverizing Machinery.**

Allis-Chalmers Mfg. Co., Milwaukee, Wis.  
Day Pulverizer Co., Knoxville, Tenn.  
Fuller Lehigh Co., Fullerton, Pa.

McLanahan-Stone Machine Co., Hollidaysburg, Pa.  
Raymond Bros. Impact Pulverizer Co., Chicago, Ill.  
Sturtevant Mill Co., Boston, Mass.  
Universal Crusher Co., Cedar Rapids, Iowa.  
W-K-M Co., Inc., Houston, Texas.

**CULVERT PIPE (Cast Iron.)**

Amer. Cast Iron Pipe Co., Birmingham.  
Cast Iron Pipe Research Assn., Chicago.  
Galloway Works & Mfg. Co., Galloway, O.  
U. S. Pipe & Foundry Co., Burlington, N. J.

**—(Corrugated Metal.)**

Americo Culvert Mfrs. Assn., Middletown, O.  
Dixie Culvert & Metal Co., Atlanta, Ga.  
Dixie Culvert Mfg. Co., Little Rock, Ark.  
Galloway Works & Mfg. Co., Galloway, O.  
Louisiana Corp., Culvert Co., Baton Rouge, La.

Tenn. Metal Culvert Co., Nashville, Tenn.  
Western Metal Mfg. Co., Houston, Texas.

**CURB PROTECTORS (Steel Bars.)**

National Steel Fabric Co., Pittsburgh, Pa.  
Truscon Steel Co., Youngstown, O.

**CUTTERS (Wire Rope.)**

Leschen & Sons Rope Co., A., St. Louis.

**CUTTING COMPOUNDS.**

Oakite Products, Inc., New York, N. Y.

**CYLINDERS (Compressed Air, Gas.)**

Janney, Jr., Jos. A., Phila., Pa.  
National Tube Co., Pittsburgh, Pa.

**DERRICKS and Derrick Fittings.**

Clyde Iron Works Sales Co., Duluth, Minn.  
Sasgen Derrick Co., Chicago, Ill.

**DESKS (School.)**

Andrews Co., A. H., Chicago, Ill.

**—(Steel Factory.)**

Angie Steel Stool Co., Plainwell, Mich.

**DIFFUSERS.**

Swenson Evaporator Co., Harvey, Ill.

**DIGESTERS.**

Swenson Evaporator Co., Harvey, Ill.

**DITCHING MACHINERY.**

Alder-Green Co., Aurora, Ill.  
Bay City Shovels, Inc., Bay City, Mich.

Buckeye Traction Ditcher Co., Findlay, O.  
Harnischfeger Corp., Milwaukee, Wis.

Hawley Corp., The, New York, N. Y.

Industrial Brownhoist Corp., Cleveland.

Northwest Engineering Co., Chicago, Ill.

Ohio Power Shovel Co., Lima, Ohio.

Owen Bucket Co., The, Cleveland, O.

Parsons Co., Newton, Iowa.

**DOORS (Fire.)**

Merchant & Evans Co., Philadelphia, Pa.

Richards-Wilcox Mfg. Co., Aurora, Ill.

**—(Fireproof, Air Chamber.)**

Wilson Corp., The J. G., New York.

**—(Freight Elevator.)**

Feil Co., The, Brooklyn, N. Y.

**—(Kalamain.)**

Moesch-Elliott Co., Cincinnati.

**—(Rolling, Steel and Wood.)**

Kinney Mfg. Co., The, Columbus, Ohio.

Mahen Co., R. C., Detroit, Mich.

Moesch-Elliott Corr. Co., Cincinnati.

Peil Co., The, Brooklyn, N. Y.

Wilson Corp., The J. G., New York.

**—(Steel.)**

Detroit Steel Products Co., Detroit, Mich.

Truscon Steel Co., Youngstown, O.

**—(Tubular Steel.)**

Bailey Co., Wm., Springfield, O.

**DRAFTSMEN'S SUPPLIES.**

Weber Co., Inc., F., Philadelphia, Pa.

**DRAGLINE EXCAVATORS.**

Austin Machinery Corp., Muskegon, Mich.

Bucyrus-Erie Co., Erie, Penna.

**ELECTRIC LIGHTING.**

Austin Electric Co., Frank, St. Louis.

General Electric Co., New York City.

General Electric Co., New York, N. Y.

Hawley Corp., The, New York, N. Y.

**(Dams.)**  
 Alpaugh & Sons, Chas. W., Manassas, Va.  
 Battley & Kipp, Inc., Chicago, Ill.  
 Bylesby Engineering and Management Corp., Cicero, Ill.  
 Cooper & Co., Hugh L., New York, N. Y.  
 Floyd & Lochridge, Dallas, Texas.  
 Gardner & Howe, Memphis, Tenn.  
 Hardaway Contracting Co., Columbus, Ga.  
 Harza, L. F., Chicago.  
 Hedrick Inc., Inc., Hot Springs Nat'l. Park, Ark.  
 Lee, William S., Charlotte, N. C.  
 Main, Inc., Chas. T., Boston, Mass.  
 Surrine & Co., J. E., Greenville, S. C.  
 Tucker & Laxton, Charlotte, N. C.  
 Wheeler, Walter H., Minneapolis, Minn.  
 White Engr. Corp., J. G., New York.

**(Drainage and Irrigation.)**  
 Floyd & Lochridge, Dallas, Texas.  
 Ford, Bacon & Davis, Inc., New York.  
 Fuller & McClintock, New York, N. Y.  
 Hills Co., George B., Jacksonville, Fla.  
 Ludlow Engineers, Winston-Salem, N. C.

**(Efficiency.)**  
 Barstow & Co., W. S., Reading, Pa.  
 Ernst & Ernst, New York, N. Y.

**(Electrical.)**  
 Battley & Kipp, Inc., Chicago, Ill.  
 Christian, Walter P., Greensboro, N. C.  
 Cooper & Co., Hugh L., New York, N. Y.  
 Engineering Service Corp., Houston, Tex.  
 Hoosier Engineering Co., Chicago, Ill.  
 Lee, William S., Charlotte, N. C.  
 Lockwood Greene Engrs., Inc., New York City.  
 Main, Inc., Chas. T., Boston, Mass.  
 Muller, Arthur L., Kansas City, Mo.  
 Sanderson & Porter, New York, N. Y.  
 Scofield Engineering Co., Phila., Pa.  
 Stone & Webster, Inc., Boston, Mass.  
 Tucker & Laxton, Charlotte, N. C.  
 Webb Electric Co., Anderson, S. C.  
 White Co., Gilbert C., Durham, N. C.  
 Wiley & Wilson, Lynchburg, Va.

**(Electric-Light and Power Plants.)**  
 Barrows, H. K., Boston, Mass.  
 Battley & Kipp, Inc., Chicago, Ill.  
 Biggs Eng. Co., W. E., Knoxville, Tenn.  
 Bylesby Engineering and Management Corp., Chicago, Ill.  
 Cooper & Co., Hugh L., New York, N. Y.  
 Ford, Bacon & Davis, Inc., New York.  
 Lee, William S., Charlotte, N. C.  
 Long Co., The M. A., Baltimore, Md.  
 Main, Inc., Chas. T., Boston, Mass.  
 Muller, Arthur L., Kansas City, Mo.  
 Sanderson & Porter, New York, N. Y.  
 Scofield Engineering Co., Phila., Pa.  
 Stone & Webster, Inc., Boston, Mass.  
 Tucker & Laxton, Charlotte, N. C.  
 White Engineering Corp., J. G., New York.  
 White Co., Gilbert C., Durham, N. C.

**(Flood Control.)**  
 Floyd & Lochridge, Dallas, Texas.  
 Harza, L. F., Chicago.

**(Gas.)**  
 Bylesby Engineering and Management Corp., Chicago, Ill.  
 Ford, Bacon & Davis, Inc., New York.

**(Geological.)**  
 De Kalb, Courtenay, New York City.  
 Froehling & Robertson, Richmond, Va.  
 Wadleigh & Bailey, Washington, D. C.

**(Harbor Improvements.)**  
 Billingsley, James W., New Orleans, La.  
 Engineering Service Corp., Houston, Tex.  
 Fay, Spofford & Thordike, Boston, Mass.

**(Heating.)**  
 Battley & Kipp, Inc., Chicago, Ill.  
 Biggs Eng. Co., W. E., Knoxville, Tenn.  
 Wiley & Wilson, Lynchburg, Va.

**(Hydraulic.)**  
 Alpaugh & Sons, Chas. W., Manassas, Va.  
 Barrows, H. K., Boston, Mass.  
 Floyd & Lochridge, Dallas, Texas.  
 Fuller & McClintock, New York, N. Y.  
 Harza, L. F., Chicago.  
 Main, Inc., Chas. T., Boston, Mass.

**(Hydro-electric.)**  
 Alpaugh & Sons, Chas. W., Manassas, Va.  
 Barrows, H. K., Boston, Mass.  
 Battley & Kipp, Inc., Chicago, Ill.  
 Bylesby Engineering and Management Corp., Chicago, Ill.  
 Cooper & Co., Hugh L., New York, N. Y.  
 Harza, L. F., Chicago.  
 Main, Inc., Chas. T., Boston, Mass.

**(Ice and Refrigerating.)**  
 Engineering Service Corp., Houston, Texas.  
 Ophuls & Hill, Inc., New York, N. Y.

**(Industrial Plants.)**  
 Barstow & Co., W. S., Reading, Pa.  
 Bartlett Engrs., Inc., Terrell, San Antonio, Texas.  
 Battley & Kipp, Inc., Chicago, Ill.  
 Biggs Eng. Co., W. E., Knoxville, Tenn.  
 Billingsley, James W., New Orleans, La.  
 Charleston Constructors, Inc., Charleston, S. C.  
 Consoor, Olden & Quinlan, Inc., Chicago.  
 Converse & Co., J. B., Mobile, Ala.  
 Fay, Spofford & Thordike, Boston, Mass.  
 Gannett, Seelye & Fleming, Inc., Harrisburg, Pa.  
 Gardner & Howe, Memphis, Tenn.

**(Mining. See Engineers, Geological.)**

**(Municipal.)**  
 Bartlett Engrs., Inc., Terrell, San Antonio, Texas.  
 Billingsley, James W., New Orleans, La.  
 Consoor, Olden & Quinlan, Inc., Chicago.  
 Dow & Smith, New York, N. Y.  
 Gannett, Seelye & Fleming, Inc., Harrisburg, Pa.  
 Harrus Engr. Co., C. N., Nashville, Tenn.  
 Hills Co., George B., Jacksonville, Fla.  
 Howerton Engineering Co., Asheville, N. C.  
 Knowles, Inc., Morris, Pittsburgh, Pa.  
 Ludlow Engineers, Winston-Salem, N. C.  
 McCrary Co., The J. B., Atlanta, Ga.  
 Spoon & Lewis, Greensboro, N. C.  
 White Co., Gilbert C., Durham, N. C.

**(Paving and Roads.)**  
 Billingsley, James W., New Orleans, La.  
 Dow & Smith, New York, N. Y.  
 Freeland, Roberts & Co., Nashville, Tenn.  
 Harrus Engr. Co., C. N., Nashville, Tenn.  
 Howerton Engineering Co., Asheville, N. C.  
 Ludlow Engineers, Winston-Salem, N. C.  
 McCrary Co., The J. B., Atlanta, Ga.  
 Spoon & Lewis, Greensboro, N. C.  
 White Co., Gilbert C., Durham, N. C.

**(Production.)**  
 Scofield Engr. Co., Phila., Pa.

**(Public Service Properties.)**  
 Bylesby Engineering & Management Corp., Chicago, Ill.  
 Cooper & Co., Hugh L., New York, N. Y.  
 Ford, Bacon & Davis, Inc., New York.  
 Fuller & McClintock, New York, N. Y.  
 Gannett, Seelye & Fleming, Inc., Harrisburg, Pa.  
 Knowles, Inc., Morris, Pittsburg, Pa.  
 Main, Inc., Chas. T., Boston, Mass.  
 Sanderson & Porter, New York, N. Y.  
 Scofield Engineering Co., Phila., Pa.  
 Surrine & Co., J. E., Greenville, S. C.  
 Tucker & Laxton, Charlotte, N. C.  
 White Engineering Corp., J. G., New York.

**(Railroad.)**  
 Jenny, L. Alfred, Dumont, N. J.  
 Mess & Mees, Charlotte, N. C.

**(Reinforced Concrete Bridges, Buildings, etc.)**  
 Atlantic Bridge Co., Greensboro, N. C.  
 Battley & Kipp, Inc., Chicago, Ill.  
 Biggs Eng. Co., W. E., Knoxville, Tenn.  
 Billingsley, James W., New Orleans, La.  
 Charleston Constructors, Inc., Charleston, S. C.  
 Consoor, Olden & Quinlan, Inc., Chicago.  
 Converse & Co., J. B., Mobile, Ala.  
 Fay, Spofford & Thordike, Boston, Mass.  
 Gannett, Seelye & Fleming, Inc., Harrisburg, Pa.  
 Gardner & Howe, Memphis, Tenn.

**(Excavating Machinery.)**  
 Bay City Shovels, Inc., Bay City, Mich.  
 Buckeye Traction Ditcher Co., Findley, O.  
 Bucyrus-Erie Co., Erie, Penna.  
 Clyde Iron Works Sales Co., Duluth, Minn.  
 Harnischfeger Corp., Milwaukee, Wis.  
 Hayward Co., The, New York, N. Y.  
 Industrial Brownhoist Corp., Cleveland.  
 Monighan Mfg. Corp., Chicago, Ill.  
 Northwest Engineering Co., Chicago, Ill.  
 Owen Bucket Co., The, Cleveland, Ohio.  
 Parsons Co., The, Newton, Iowa.  
 Tew Shovel Co., The, Lorain, Ohio.  
 Universal Power Shovel Co., Milwaukee, Wis.

**EXCAVATORS (Clamshell and Orange Peel.)**  
 Northwest Engineering Co., Chicago, Ill.  
 Ohio Power Shovel Co., Lima, Ohio.  
 Tew Shovel Co., Lorain, Ohio.

**(Dragline. See Dragline Excavators.)**

**(Trench.)**  
 Barber-Green Co., Aurora, Ill.  
 Bay City Shovels, Inc., Bay City, Mich.  
 Buckeye Traction Ditcher Co., Findley, O.  
 Bucyrus-Erie Co., Erie, Penna.  
 Harnischfeger Corp., Milwaukee, Wis.  
 Hayward Co., The, New York, N. Y.  
 Monighan Mfg. Corp., Chicago, Ill.  
 Ohio Power Shovel Co., Lima, Ohio.  
 Parsons Co., The, Newton, Iowa.  
 Universal Power Shovel Co., Milwaukee, Wis.

**EXHAUST FANS (See Blowers and Exhaust Fans.)**

**Systems (See Blowers and Exhaust Fans.)**

**EXPANSION JOINTS (Road and Street.)**  
 Servicized Premoulded Products, Inc., Chicago, Ill.

**EXPLOSIVES.**  
 Du Pont de Nemours & Co., Inc., E. L., Wilmington, Del.  
 Hercules Powder Co., Inc., Wilmington, Del.

**FACTORY Management Systems.**  
 Ernst & Ernst, New York, N. Y.

**FANS, Exhaust (See Blowers and Exhaust Fans.)**

**FEED-WATER HEATERS and Purifiers.**  
 American Water Softener Co., Phila., Pa.

**FELT (Building Sheathing.)**  
 Barrett Co., The, New York, N. Y.

**FENCE POSTS (Creosoted.)**  
 Ayer & Lord Tie Co., Chicago, Ill.

**FENCING Entrance Gates (Iron, Steel and Wire.)**  
 American Steel and Wire Co., Balt., Md.  
 Anchor Post Fence Co., Baltimore, Md.  
 Page Fence Association, Chicago, Ill.  
 Stewart Iron Works Co., Cincinnati, O.

**FIELD and Industrial, Wire Woven.)**  
 American Steel and Wire Co., Balt., Md.  
 Anchor Post Fence Co., Baltimore, Md.  
 Gulf States Steel Co., Birmingham, Ala.  
 Page Fence Association, Chicago, Ill.  
 Stewart Iron Works Co., Cincinnati, O.

**FERTILIZER MACHINERY.**  
 Raymond Bros., Impact Pulp Co., Chicago.

**FILTER (For Domestic and Industrial Purposes.)**  
 American Water Softener Co., Phila., Pa.

**HOISTING.**  
 International Filter Co., Chicago, Ill.  
 Rees, S. P., Atlanta.  
 Roberts Filter Mfg. Co., Darby (Phil.), Pa.

**Seaford & Sons Co., Wm. B., Oakmont, Pa.**

**FINANCING.**  
 Akers, William, Atlanta, Ga.  
 Century Trust Co., Balt., Md.  
 Electric Bond & Share Co., New York.  
 Equitable Trust Co., New York City.  
 Garroway & Co., S. G., Chicago.  
 Gay & Co., W. O., New York, N. Y.  
 Marx & Co., Birmingham, Ala.

**FIRE CLAY.**  
 Alabama Clay Products Co., Birmingham.  
 Cambria Clay Products Co., Blackfork, O.

**FIRE EXTINGUISHERS.**  
 Myers & Bro. Co., The F. E., Ashland, O.

**FIREPROOF Building Material.**  
 Bannon Pipe Co., Louisville, Ky.  
 Robertson Co., H. H., Pittsburgh.

**Doors and Shutters.**  
 Kinnear Mfg. Co., The, Columbus, Ohio.  
 Mahon Co., R. C., Detroit, Mich.  
 Moeschl-Edwards Corp., Cincinnati, O.  
 Richards-Wilcox Mfg. Co., Aurora, Ill.

**FIREPROOFING MATERIAL and Construction.**  
 Peelle Co., The, Brooklyn, N. Y.

**FITTINGS (Wire Rope.)**  
 Leschen & Sons Rope Co., A., St. Louis.

**FLANGES (Iron and Steel.)**  
 Amer. Cast Iron Pipe Co., Birmingham.  
 Dart Mfg. Co., E. M., Providence, R. I.

National Cast Iron Pipe Co., Birmingham, Ala.	GALVANIZING (Hot Dip.) Bessemer Galvanizing Works, Birmingham.	GRAVEL (Roofing and Road.) American Limestone Co., Knoxville, Tenn.	—(Steam.) Clyde Iron Works Sales Co., Duluth, Minn.
Taylor Forges & Pipe Wks., Chicago, Ill.	Cattle & Bros., Jos. P., Philadelphia, Pa.	Arundel Corp., The, Baltimore, Md.	Dake Engine Co., Grand Haven, Mich.
U. S. Pipe & Foundry Co., Burlington, N. J.	Newport News Shipbuilding & Drydock Co., Newport News, Va.	Boxley & Co., W. W., Roanoke, Va.	Mundy Hoisting Engine Co., J. S., Newark, N. J.
Vogt Mch Co., Henry, Louisville, Ky.	—	Friend & Co., Inc., Petersburg, Va.	Street Bros. Mch. Wks., Chattanooga, Tenn.
— <b>and Flanged Fittings.</b> Grinnell Co., Inc., Providence, R. I.	—	—	—
<b>FLOOR (Asphalt Mastic.)</b> Barber Asphalt Co., Philadelphia, Pa.	<b>GARAGES (Metal.)</b> Maryland Metal Building Co., Baltimore, Md.	<b>GREASE Cups.</b> Lunkenheimer Co., The, Cincinnati, O.	<b>HOOPS, Bands, etc. (Galvanized.)</b> Connors Steel Co., Birmingham, Ala.
— <b>(Asphalt Plank.)</b> Servicel Premoulded Products, Inc., Chicago, Ill.	<b>GARBAGE DISPOSAL SYSTEMS</b> Seacell Corp., New York, N. Y.	<b>GRILLES (Brass, Bronze, Steel, etc.)</b> Manhattan Perforated Metal Co., Inc., Long Island City, N. Y.	<b>HOPPERS (Aggregate, Measuring and Weighing.)</b> Blaw-Knox Co., Pittsburgh, Pa.
— <b>(Composition.)</b> Johns-Manville Corp., New York, N. Y.	— <b>Producers.</b> Gas-O-Flame Stove Works, Port Deposit, Md.	— <b>GRINDERS (Cylinder.)</b> Hutto Engineering Co., Detroit, Mich.	Butler Bin Co., Waukesha, Wis.
— <b>(Cork Composition.)</b> Congoleum-Nairn, Inc., Kearny, N. J.	Morgan Construction Co., Worcester, Mass.	— <b>(Electric.)</b> Chicago Pneumatic Tool Co., New York.	—
— <b>(Hardwood, Maple, Oak.)</b> Nashville Hardwood Flooring Co., Nashville, Tenn.	Wood & Co., R. D., Philadelphia, Pa.	— <b>(Gypsum, Limestone, etc.)</b> Raymond Bros. Impact Pulv. Co., Chicago.	—
— <b>(Northern Hard Maple.)</b> Holt Hardwood Co., Oconto, Wis.	— <b>GASOLINE and KEROSENE.</b> Gulf Refining Co., Pittsburgh, Pa.	— <b>GUARD RAIL (Road.)</b> National Traffic Guard Co., Atlanta.	— <b>HOSE (Rubber.)</b> Republic Rubber Co., Youngstown, Ohio.
— <b>(Open Steel.)</b> Blaw-Knox Co., Pittsburgh, Pa.	— <b>GASOLINE SHOVELS (See</b> Shovels.)	— <b>GRINDING MACHINERY (Flexible Shaft.)</b> Hutto Engineering Co., Detroit, Mich.	— <b>HOTELS.</b> Murphy's Hotel, Richmond, Va.
Irving Iron Works Co., Long Is., City, N. Y.	— <b>GATES (Automatic Drainage.)</b> Armeo Culvert Mfrs. Assn., Middletown, O.	Strand & Co., N. A., Chicago, Ill.	Rice Hotel, Houston, Texas.
Kerlow Steel Flooring Co., Jersey City, N. J.	Dixie Culvert & Metal Co., Atlanta, Ga.	— <b>GRINDERS (Cylinder.)</b> Hutto Engineering Co., Detroit, Mich.	Southern Hotel, The, Baltimore, Md.
— <b>(Rubber and Cork.)</b> Congoleum-Nairn, Inc., Kearny, N. J.	Dixie Culvert Mfg. Co., Little Rock, Ark.	— <b>(Electric.)</b> Chicago Pneumatic Tool Co., New York.	— <b>HOUSE MOVING.</b> Eichleay, Jr. Co., John, Pittsburgh.
— <b>Anchors.</b> Bull Dog Floor Clip Co., Winterset, Iowa.	Louisiana Corp. Culvert Co., Baton Rouge, La.	— <b>(Gypsum, Limestone, etc.)</b> Raymond Bros. Impact Pulv. Co., Chicago.	— <b>HULLS (Steel.)</b> American Steel Dredge Co., Fort Wayne, Ind.
— <b>Covering.</b> Congoleum-Nairn, Inc., Kearny, N. J.	Tenn. Metal Culvert Co., Nashville, Tenn.	— <b>GUARD RAIL (Road.)</b> National Traffic Guard Co., Atlanta.	— <b>HUMIDIFYING AND DRYING EQUIPMENT.</b> Grinnell Co., Inc., Providence, R. I.
— <b>Hardener (Concrete.)</b> Sonneborn Sons, Inc., L., New York.	Western Metal Mfg. Co., Houston, Texas.	— <b>GUNITE CONSTRUCTION.</b> Cement-Gun Co., Inc., Allentown, Pa.	— <b>HYDRANTS (Fire.)</b> Columbian Iron Works, Chattanooga, Tenn.
— <b>Plates and Stair Treads.</b> American Pressed Steel Co., Phila., Pa.	— <b>Gauge Glasses.</b> Jenkins Bros., New York, N. Y.	Cement Gun Construction Co., Chicago.	Ludlow Valve Mfg. Co., The, Troy, N. Y.
Central Iron & Steel Co., Harrisburg, Pa.	— <b>GEARS.</b> DeLaval Steam Turbine Co., Trenton, N. J.	Gunitone Constr. Co., Kansas City.	Myers & Bro. Co., The, V. E., Ashland, Ky.
Ryerson & Son, Inc., Jos. T., St. Louis and New York.	Earle Gear & Machine Co., Phila., Pa.	Gunitone Constr. Co., New York City.	Vogt Brothers Mfg. Co., Louisville, Ky.
— <b>Steel (For Concrete Culverts, Roads, Streets.)</b> Blaw-Knox Co., Pittsburgh, Pa.	Foots Bros. Gear & Mch. Co., Chicago.	Hutt Engineering Co., Birmingham, Ala.	Wood & Co., R. D., Philadelphia, Pa.
— <b>Wax.</b> Congoleum-Nairn, Inc., Kearny, N. J.	— <b>Cut.</b> Ohio Gear Co., Cleveland, Ohio.	— <b>GUNPOWDER.</b> Du Pont de Nemours & Co., Inc., E. I., Wilmington, Del.	— <b>HYDRO - ELECTRIC POWER COMPANIES (Offering Industrial and Commercial Opportunities.)</b> Alabama Power Co., Birmingham, Ala.
<b>FLUSH-TANK SIPHONS.</b> Kaustine Co., Inc., Perry, N. Y.	— <b>(Worm Reduction.)</b> DeLaval Steam Turbine Co., Trenton, N. J.	Hercules Powder Co., Inc., Wilmington, Del.	Central Power & Light Co., San Antonio, Tex.
Pacific Flush-Tank Co., New York, N. Y.	Foots Bros. Gear and Mch. Co., Chicago.	— <b>GUNS (Hydraulic.)</b> Georgia Iron Works, Augusta, Ga.	Duke Power Co., Charlotte, N. C.
<b>FLYER PRESSERS.</b> Southern Spindle & Flyer Co., Charlotte, N. C.	— <b>GENERATORS, MOTORS (New.)</b> Allis-Chalmers Mfg. Co., Milwaukee, Wis.	HANGARS (Airplane.) Braden Steel Corp., Tulsa, Okla.	Georgia Power Co., Atlanta, Ga.
— <b>FLYERS.</b> Southern Spindle & Flyer Co., Charlotte, N. C.	Westinghouse Elec. & Mfg. Co., E. Pittsburgh, Pa.	Maryland Metal Bldg. Co., Balt., Md.	Kentucky Utilities Co., Louisville, Ky.
— <b>FORGINGS (Drop.)</b> Vogt Mch. Co., Henry, Louisville, Ky.	— <b>(Used.)</b> Belyea Co., Inc., New York City.	HANGERS (Door, All Kinds.) Richards-Wilcox Mfg. Co., Aurora, Ill.	Tennessee Electric Power Co., Chattanooga, Tenn.
FORMS, Steel (For Concrete, Culverts, Roads, Streets, Curbs, Sidewalks, Tiles.) Blaw-Knox Co., Pittsburgh, Pa.	Electrical Equip. Co., Raleigh, N. C.	— <b>(Line Shaft.)</b> American Pulley Co., Philadelphia, Pa.	Texas Power & Light Co., Dallas, Texas.
FOUNDATION MASONRY. Calligan Co., A. H., Richmond, Va.	Grayson Electric Co., Chicago.	WOOD & SONS CO., T. B., Chambersburg, Pa.	— <b>ICE and Refrigerating Machinery and Supplies.</b> Ingersoll-Rand Co., New York, N. Y.
FOUNDRIES and Machine Shops. Deemer Steel Casting Co., New Castle, Del.	Nashville Ind. Corp., Old Hickory, Tenn.	HARBOR IMPROVEMENTS. Arundel Corp., Baltimore, Md.	Vogt Mch. Co., Henry, Louisville, Ky.
General Machine Works, York, Pa.	Nussbaum & Co., V. M., Ft. Wayne, Ind.	Atlantic, Gulf & Pacific Co., New York.	— <b>INCINERATORS.</b> Duplex Hanger Co., Cleveland, Ohio.
Goldens' Fdry. & Mch. Co., Columbus, Ga.	O'Brien Machinery Co., Phila., Pa.	— <b>HARDWARE (Door.)</b> Richards-Wilcox Mfg. Co., Aurora, Ill.	Swenson Evaporator Co., Harvey, Ill.
Lombard Iron Works & Supply Co., Augusta, Ga.	Randie Machinery Co., The, Cincinnati, O.	HEATERS (Asphalt.) Honhorst Co., Jos., Cincinnati, O.	— <b>INCORPORATORS.</b> Corporation Service Co., Wilmington, Del.
Moccasin Bushing Co., Chattanooga, Tenn.	Stewart Elec. Co., John A., Cincinnati.	HEATING APPARATUS (Engineers and Contractors.) Grinnell Co., Inc., Providence, R. I.	Delaware Registration Trust Co., Wilmington, Del.
FOUNDRY Equipment and Supplies. Chain Belt Co., Milwaukee, Wis.	— <b>GEOLOGISTS. (See Engineers, Geological.)</b>	— <b>HOISTING MACHINERY.</b> Clyde Iron Works Sales Co., Duluth, Minn.	— <b>INDUSTRIAL DEVELOPMENT.</b> Pace Co., The, Chicago.
Hill & Griffith Co., The, Cincinnati, O.	Binswanger & Co., Inc., Memphis, Tenn.	HOISTS (Air Portable.) Ingersoll-Rand Co., New York, N. Y.	— <b>Surveys.</b> Pace Co., The, Chicago.
— <b>Facings (Talc and Soapstone.)</b> Hill & Griffith Co., The, Cincinnati, O.	Hires Turner Glass Co., Philadelphia, Pa.	Sullivan Machinery Co., Chicago, Ill.	Technics Service Co., New York, N. Y.
FUMIGATORS (Fruit, Nuts, Nursery Stock, etc.) Union Tank & Pipe Co., Los Angeles, Cal.	— <b>PLATE.</b> Binswanger & Co., Inc., Memphis, Tenn.	— <b>HOISTS (Chain.)</b> Harrington Co., The, Philadelphia, Pa.	— <b>INJECTORS.</b> Jenkins Bros., New York, N. Y.
FURNACES (Industrial.) Combustion Engr., Corp., New York City.	Blue Ridge Glass Corp., Kingsport, Tenn.	— <b>HOISTS (Electric.)</b> Clyde Iron Works Sales Co., Duluth, Minn.	Randie Machinery Co., The, Cincinnati, O.
— <b>(Water-Cooled.)</b> Combustion Engr., Corp., New York City.	Hires Turner Glass Co., Philadelphia, Pa.	HARNISCHFEGER CORP., Milwaukee, Wis.	— <b>INSULATING MATERIALS.</b> Johns-Manville Corp., New York, N. Y.
Fuller Lehigh Co., Fullerton, Pa.	— <b>(Wire.)</b> Blue Ridge Glass Corp., Kingsport, Tenn.	Milwaukee Elec. Crane & Hoist Corp., Milwaukee, Wis.	Okonite Co., New York, N. Y.
GALVANIZED Products. Cattle & Bros., Jos. P., Philadelphia, Pa.	Hires Turner Glass Co., Phila., Pa.	Mundy Hoisting Engine Co., J. S., Newark, N. J.	— <b>INVESTMENT SECURITIES.</b> Electric Bond & Share Co., New York.
— <b>Steel and Iron.</b> American Rolling Mill Co., Middletown, O.	— <b>GRAPHTITE.</b> Dixon Crucible Co., Jos., Jersey City, N. J.	Novo Engine Co., Lansing, Mich.	Gay & Co., W. O., New York City.
American Sheet & Tin Plate Co., Pittsburgh, Pa.	Schofield's Sons Co., J. S., Macon, Ga.	O. K. Clutch & Mch. Co., Columbia, Pa.	Hanchett Bond Co., Inc., The, Chicago, Ill.
Granite City Steel Co., Granite City, Ill.	Vogt Machine Co., Henry, Louisville, Ky.	Street Bros. Mch. Wks., Chattanooga, Tenn.	Mark & Co., Birmingham, Ala.
Republic Iron & Steel Co., Youngstown, O.	— <b>GRATING (Area, Flooring, Sidewalk.)</b> Blaw-Knox Co., Pittsburgh, Pa.	— <b>HOISTS (Gasoline.)</b> Clyde Iron Works Sales Co., Duluth, Minn.	Mercantile Trust Co., Baltimore, Md.
—	Hendrick Mfg. Co., Carbondale, Pa.	Dake Engine Co., Grand Haven, Mich.	Peabody & Co., John, Chicago.
	Irving Iron Works, Long Is., City, N. Y.	Mundy Hoisting Engine Co., J. S., Newark, N. J.	Provident Savings Bank & Trust Co., Cincinnati, Ohio.
	Kerlow Steel Flooring Co., Jersey City, N. J.	Novo Engine Co., Lansing, Mich.	Tennessee Humphrey Co., Atlanta, Ga.
	— <b>GRATES and Grate Bars.</b> Schofield's Sons Co., J. S., Macon, Ga.	O. K. Clutch & Mch. Co., Columbia, Pa.	Seasongood & Mayer, Cincinnati, Ohio.
	Vogt Machine Co., Henry, Louisville, Ky.	Street Bros. Mch. Wks., Chattanooga, Tenn.	Taylor, Wilson & Co., Inc., Cincinnati, O.
	— <b>GRATING (Area, Flooring, Sidewalk.)</b> Blaw-Knox Co., Pittsburgh, Pa.	— <b>JOINTS (Pipe.)</b> Leadite Co., The, Philadelphia, Pa.	— <b>IRON.</b> Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.
	Hendrick Mfg. Co., Carbondale, Pa.	— <b>JOINTS (Hand Power.)</b> Clyde Iron Works Sales Co., Duluth, Minn.	— <b>(Ingot, For Culverts, etc.)</b> American Rolling Mill Co., Middletown, O.
	Irving Iron Works, Long Is., City, N. Y.	Dake Engine Co., Grand Haven, Mich.	— <b>JOIST HANGERS.</b> Duplex Hanger Co., Cleveland, Ohio.
	Kerlow Steel Flooring Co., Jersey City, N. J.	Mundy Hoisting Engine Co., J. S., Newark, N. J.	
	— <b>GRATES and Grate Bars.</b> Schofield's Sons Co., J. S., Macon, Ga.	Novo Engine Co., Lansing, Mich.	
	Vogt Machine Co., Henry, Louisville, Ky.	O. K. Clutch & Mch. Co., Columbia, Pa.	
	— <b>GRATING (Area, Flooring, Sidewalk.)</b> Blaw-Knox Co., Pittsburgh, Pa.	Street Bros. Mch. Wks., Chattanooga, Tenn.	
	Hendrick Mfg. Co., Carbondale, Pa.	— <b>JOINTS (Hand Power.)</b> Clyde Iron Works Sales Co., Duluth, Minn.	
	Irving Iron Works, Long Is., City, N. Y.	Dake Engine Co., Grand Haven, Mich.	
	Kerlow Steel Flooring Co., Jersey City, N. J.	Mundy Hoisting Engine Co., J. S., Newark, N. J.	
	— <b>GRATES and Grate Bars.</b> Schofield's Sons Co., J. S., Macon, Ga.	Novo Engine Co., Lansing, Mich.	
	Vogt Machine Co., Henry, Louisville, Ky.	O. K. Clutch & Mch. Co., Columbia, Pa.	
	— <b>GRATING (Area, Flooring, Sidewalk.)</b> Blaw-Knox Co., Pittsburgh, Pa.	Street Bros. Mch. Wks., Chattanooga, Tenn.	
	Hendrick Mfg. Co., Carbondale, Pa.	— <b>JOINTS (Hand Power.)</b> Clyde Iron Works Sales Co., Duluth, Minn.	
	Irving Iron Works, Long Is., City, N. Y.	Dake Engine Co., Grand Haven, Mich.	
	Kerlow Steel Flooring Co., Jersey City, N. J.	Mundy Hoisting Engine Co., J. S., Newark, N. J.	
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	— <b>GRATING (Area, Flooring, Sidewalk.)</b> Blaw-Knox Co., Pittsburgh, Pa.	Street Bros. Mch. Wks., Chattanooga, Tenn.	
	Hendrick Mfg. Co., Carbondale, Pa.	— <b>JOINTS (Hand Power.)</b> Clyde Iron Works Sales Co., Duluth, Minn.	
	Irving Iron Works, Long Is., City, N. Y.	Dake Engine Co., Grand Haven, Mich.	
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	— <b>GRATING (Area, Flooring, Sidewalk.)</b> Blaw-Knox Co., Pittsburgh, Pa.	Street Bros. Mch. Wks., Chattanooga, Tenn.	
	Hendrick Mfg. Co., Carbondale, Pa.	— <b>JOINTS (Hand Power.)</b> Clyde Iron Works Sales Co., Duluth, Minn.	
	Irving Iron Works, Long Is., City, N. Y.	Dake Engine Co., Grand Haven, Mich.	
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	— <b>GRATING (Area, Flooring, Sidewalk.)</b> Blaw-Knox Co., Pittsburgh, Pa.	Street Bros. Mch. Wks., Chattanooga, Tenn.	
	Hendrick Mfg. Co., Carbondale, Pa.	— <b>JOINTS (Hand Power.)</b> Clyde Iron Works Sales Co., Duluth, Minn.	
	Irving Iron Works, Long Is., City, N. Y.	Dake Engine Co., Grand Haven, Mich.	
	Kerlow Steel Flooring Co., Jersey City, N. J.	Mundy Hoisting Engine Co., J. S., Newark, N. J.	
	— <b>GRATES and Grate Bars.</b> Schofield's Sons Co., J. S., Macon, Ga.	Novo Engine Co., Lansing, Mich.	
	Vogt Machine Co., Henry, Louisville, Ky.	O. K. Clutch & Mch. Co., Columbia, Pa.	
	— <b>GRATING (Area, Flooring, Sidewalk.)</b> Blaw-Knox Co., Pittsburgh, Pa.	Street Bros. Mch. Wks., Chattanooga, Tenn.	
	Hendrick Mfg. Co., Carbondale, Pa.	— <b>JOINTS (Hand Power.)</b> Clyde Iron Works Sales Co., Duluth, Minn.	
	Irving Iron Works, Long Is., City, N. Y.	Dake Engine Co., Grand Haven, Mich.	
	Kerlow Steel Flooring Co., Jersey City, N. J.	Mundy Hoisting Engine Co., J. S., Newark, N. J.	
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	Vogt Machine Co., Henry, Louisville, Ky.	O. K. Clutch & Mch. Co., Columbia, Pa.	
	— <b>GRATING (Area, Flooring, Sidewalk.)</b> Blaw-Knox Co., Pittsburgh, Pa.	Street Bros. Mch. Wks., Chattanooga, Tenn.	
	Hendrick Mfg. Co., Carbondale, Pa.	— <b>JOINTS (Hand Power.)</b> Clyde Iron Works Sales Co., Duluth, Minn.	
	Irving Iron Works, Long Is., City, N. Y.	Dake Engine Co., Grand Haven, Mich.	
	Kerlow Steel Flooring Co., Jersey City, N. J.	Mundy Hoisting Engine Co., J. S., Newark, N. J.	
	— <b>GRATES and Grate Bars.</b> Schofield's Sons Co., J. S., Macon, Ga.	Novo Engine Co., Lansing, Mich.	
	Vogt Machine Co., Henry, Louisville, Ky.	O. K. Clutch & Mch. Co., Columbia, Pa.	
	— <b>GRATING (Area, Flooring, Sidewalk.)</b> Blaw-Knox Co., Pittsburgh, Pa.	Street Bros. Mch. Wks., Chattanooga, Tenn.	
	Hendrick Mfg. Co., Carbondale, Pa.	— <b>JOINTS (Hand Power.)</b> Clyde Iron Works Sales Co., Duluth, Minn.	
	Irving Iron Works, Long Is., City, N. Y.	Dake Engine Co., Grand Haven, Mich.	
	Kerlow Steel Flooring Co., Jersey City, N. J.	Mundy Hoisting Engine Co., J. S., Newark, N. J.	
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	Vogt Machine Co., Henry, Louisville, Ky.	O. K. Clutch & Mch. Co., Columbia, Pa.	
	— <b>GRATING (Area, Flooring, Sidewalk.)</b> Blaw-Knox Co., Pittsburgh, Pa.	Street Bros. Mch. Wks., Chattanooga, Tenn.	
	Hendrick Mfg. Co., Carbondale, Pa.	— <b>JOINTS (Hand Power.)</b> Clyde Iron Works Sales Co., Duluth, Minn.	
	Irving Iron Works, Long Is., City, N. Y.	Dake Engine Co., Grand Haven, Mich.	
	Kerlow Steel Flooring Co., Jersey City, N. J.	Mundy Hoisting Engine Co., J. S., Newark, N. J.	
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	Vogt Machine Co., Henry, Louisville, Ky.	O. K. Clutch & Mch. Co., Columbia, Pa.	
	— <b>GRATING (Area, Flooring, Sidewalk.)</b> Blaw-Knox Co., Pittsburgh, Pa.	Street Bros. Mch. Wks., Chattanooga, Tenn.	
	Hendrick Mfg. Co., Carbondale, Pa.	— <b>JOINTS (Hand Power.)</b> Clyde Iron Works Sales Co., Duluth, Minn.	
	Irving Iron Works, Long Is., City, N. Y.	Dake Engine Co., Grand Haven, Mich.	
	Kerlow Steel Flooring Co., Jersey City, N. J.	Mundy Hoisting Engine Co., J. S., Newark, N. J.	
	— <b>GRATES and Grate Bars.</b> Schofield's Sons Co., J. S., Macon, Ga.	Novo Engine Co., Lansing, Mich.	
	Vogt Machine Co., Henry, Louisville, Ky.	O. K. Clutch & Mch. Co., Columbia, Pa.	
	— <b>GRATING (Area, Flooring, Sidewalk.)</b> Blaw-Knox Co., Pittsburgh, Pa.	Street Bros. Mch. Wks., Chattanooga, Tenn.	
	Hendrick Mfg. Co., Carbondale, Pa.	— <b>JOINTS (Hand Power.)</b> Clyde Iron Works Sales Co., Duluth, Minn.	
	Irving Iron Works, Long Is., City, N. Y.	Dake Engine Co., Grand Haven, Mich.	
	Kerlow Steel Flooring Co., Jersey City, N. J.	Mundy Hoisting Engine Co., J. S., Newark, N. J.	
	— <b>GRATES and Grate Bars.</b> Schofield's Sons Co., J. S., Macon, Ga.	Novo Engine Co., Lansing, Mich.	
	Vogt Machine Co., Henry, Louisville, Ky.	O. K. Clutch & Mch. Co., Columbia, Pa.	
	— <b>GRATING (Area, Flooring, Sidewalk.)</b> Blaw-Knox Co., Pittsburgh, Pa.	Street Bros. Mch. Wks., Chattanooga, Tenn.	
	Hendrick Mfg. Co., Carbondale, Pa.	— <b>JOINTS (Hand Power.)</b> Clyde Iron Works Sales Co., Duluth, Minn.	
	Irving Iron Works, Long Is., City, N. Y.	Dake Engine Co., Grand Haven, Mich.	
	Kerlow Steel Flooring Co., Jersey City, N. J.	Mundy Hoisting Engine Co., J. S., Newark, N. J.	
	— <b>GRATES and Grate Bars.</b> Schofield's Sons Co., J. S., Macon, Ga.	Novo Engine Co., Lansing, Mich.	
	Vogt Machine Co., Henry, Louisville, Ky.	O. K. Clutch & Mch. Co., Columbia, Pa.	
	— <b>GRATING (Area, Flooring, Sidewalk.)</b> Blaw-Knox Co., Pittsburgh, Pa.	Street Bros. Mch. Wks., Chattanooga, Tenn.	
	Hendrick Mfg. Co., Carbondale, Pa.	— <b>JOINTS (Hand Power.)</b> Clyde Iron Works Sales Co., Duluth, Minn.	
	Irving Iron Works, Long Is., City, N. Y.	Dake Engine Co., Grand Haven, Mich.	
	Kerlow Steel Flooring Co., Jersey City, N. J.	Mundy Hoisting Engine Co., J. S., Newark, N. J.	
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	Vogt Machine Co., Henry, Louisville, Ky.	O. K. Clutch & Mch. Co., Columbia, Pa.	
	— <b>GRATING (Area, Flooring, Sidewalk.)</b> Blaw-Knox Co., Pittsburgh, Pa.	Street Bros. Mch. Wks., Chattanooga, Tenn.	
	Hendrick Mfg. Co., Carbondale, Pa.	— <b>JOINTS (Hand Power.)</b> Clyde Iron Works Sales Co., Duluth, Minn.	
	Irving Iron Works, Long Is., City, N. Y.	Dake Engine Co., Grand Haven, Mich.	
	Kerlow Steel Flooring Co., Jersey City, N. J.	Mundy Hoisting Engine Co., J. S., Newark, N. J.	
	— <b>GRATES and Grate Bars.</b> Schofield's Sons Co., J. S., Macon, Ga.	Novo Engine Co., Lansing, Mich.	
	Vogt Machine Co., Henry, Louisville, Ky.	O. K. Clutch & Mch. Co., Columbia, Pa.	
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**KETTLES (Pavers and Roofers.)**  
Honhorst Co., Jas., Cincinnati, O.

**LADDERS (Rolling.)**  
Myers & Bro. Co., The F. E., Ashland, O.  
—(Wooden.)  
Dayton Safety Ladder Co., Cincinnati, O.  
Patent Scaffolding Co., Chicago, Ill.

**LAMPS (Incandescent.)**  
General Electric Vapor Lamp Co., Hoboken, N. J.  
Western Electric Co., New York City.

**LATH (Metal.)**  
Ingalls Iron Works Co., Birmingham, Ala.  
Waterloo Constr. Co., Waterloo, Iowa.

**LAWN FURNITURE (Wire.)**  
Dufur, Baggott & Co., Baltimore, Md.

**LIGHTING (Factory and Mill.)**  
General Electric Vapor Lamp Co., Hoboken, N. J.

—(Fixtures (Electric.)  
Western Electric Co., New York City.

**LIME RECOVERY SYSTEMS.**  
Swenson Evaporator Co., Harvey, Ill.

**LININGS (Flue, Fire Clay.)**  
Lee Clay Products Co., Clearfield, Ky.  
Owensboro Sewer Pipe Co., Owensboro, Ky.

—(Tube Mill.)  
Fuller Lehigh Co., Fullerton, Pa.

**LINOLEUM (Battleship, Jasper.)**  
Congolet-Nairn, Inc., Kearny, N. J.

**LITHOGRAPHERS and ENGRAVERS.**  
Smith & Son Co., Oscar T., Baltimore, Md.  
Young & Selden Co., Baltimore, Md.

**LOADING and UNLOADING MACHINERY (Portable.)**  
Barber-Green Co., Aurora, Ill.  
Northwest Engineering Co., Chicago, Ill.

**LOCOMOTIVES (Compressed Air.)**  
Porter Co., H. K., Pittsburgh, Pa.  
—(Electric.)  
Cincinnati Car Corp. (Locomotive Div.), Cincinnati, Ohio.

—(Fireless Stopped Steam.)  
Porter Co., H. K., Pittsburgh, Pa.  
—(Gasoline.)  
Cincinnati Car Corp. (Locomotive Div.), Cincinnati, Ohio.  
Porter Co., H. K., Pittsburgh, Pa.  
Whitcomb Co., Geo. D., Rochelle, Ill.  
—(Industrial.)  
Birmingham Rail & Locomotive Co., Birmingham, Ala.  
Cincinnati Car Corp. (Locomotive Div.), Cincinnati, Ohio.  
Porter Co., H. K., Pittsburgh, Pa.  
Southern Iron & Equipment Co., Atlanta, Ga.  
Whitcomb Co., Geo. D., Rochelle, Ill.

—(Mining.)  
Cincinnati Car Corp. (Locomotive Div.), Cincinnati, Ohio.  
Porter Co., H. K., Pittsburgh, Pa.  
Whitcomb Co., Geo. D., Rochelle, Ill.  
—(Railway.)  
Cincinnati Car Corp. (Locomotive Div.), Cincinnati, Ohio.  
Porter Co., H. K., Pittsburgh, Pa.  
Southern Iron & Equipment Co., Atlanta, Ga.  
Whitcomb Co., Geo. D., Rochelle, Ill.

**LOGGING MACHINERY.**  
Clyde Iron Works Sales Co., Duluth, Minn.

**LOOM PICK COUNTER**  
Weaver-Roof, Inc., Hartford, Conn.

**LUBRICANTS.**  
Dixon Crucible Co., Jas., Jersey City, N. J.  
Gulf Refining Co., Pittsburgh, Pa.

**LUBRICATORS (Force Feed.)**  
Lunkenheimer Co., The, Cincinnati, O.

**LUBRICATION SYSTEMS.**  
Alemite Corp., Chicago, Ill.

**LUMBER (Ceiling, Flooring, Siding.)**  
Central Coal & Coke Co., Kansas City, Mo.  
Industrial Lumber Co., Elizabeth, La.  
—(Creosoted.)  
Amer. Creosote Wks., Inc., New Orleans, La.

Amer. Creosoting Co., Inc., Louisville, Ky.  
Ayer & Lord Tie Co., Inc., Chicago.  
Delaware Wood Preserving Co., Phila.

Eppinger & Russell Co., New York, N. Y.  
Gulf States Creos. Co., Hattiesburg, Miss.  
Prettyman & Sons, J. F., Charleston, S. C.  
Savannah Creos. Co., Savannah, Ga.

—(Heavy Construction, Pitch, Pine, etc.)  
Central Coal & Coke Co., Kansas City, Mo.  
Industrial Lumber Co., Elizabeth, La.

—(Salt Treated.)  
Meredith Co., William C., Atlanta.

—(Yellow Pine.)  
Central Coal & Coke Co., Kansas City, Mo.

—(Zinc Meta Arsenite Treated.)  
Curtin-Howe Corp., New York City.

**MACHINERY (Special.)**  
Bliss Co., E. W., Brooklyn, N. Y.  
Earle Gear & Machine Co., Phila., Pa.  
General Machine Works, York, Pa.

—(and Supplies (New and Used.)  
Beatty Machine & Mfg. Co., Hammond, Ind.

Belyea Co., Inc., New York City.  
Electric Service Co., Cincinnati, Ohio.  
Equip. Sales & Rentals Co., Pittsburgh.  
Heisler Engineering Corp., New York.  
Marine Metal & Supply Co., New York.  
Nashville Ind. Corp., Old Hickory, Tenn.  
O'Brien Machinery Co., The, Phila., Pa.  
Randall Machinery Co., The, Cincinnati, O.  
Ryerson & Son, Inc., Jas. T., St. Louis and New York.  
Seyfert's Sons, Inc., L. F., Phila., Pa.  
Zelnicker Supply Co., W. A., St. Louis.

**MACHINE TENDERS (Steel.)**  
Angle Steel Stodd Co., Plainwell, Mich.

—(Tools.)  
Ryerson & Son, Inc., Jas. T., St. Louis and New York.

—(Used.)  
Delta Equipment Co., Philadelphia, Pa.  
O'Brien Machinery Co., Phila., Pa.

**MAIL CHUTES.**  
Cutler Mail Chute Co., Rochester, N. Y.

**MARBLE (Producers and Manufacturers.)**  
Georgia Marble Co., Tate, Ga.

**METAL-Cutting Machinery.**  
Atkins & Co., E. C., Indianapolis, Ind.  
Earle Gear & Machine Co., Phila., Pa.

—(Working Machinery.)  
Bliss Co., E. W., Brooklyn, N. Y.  
**METERS (Venturi and Pitot Tube Types.)**  
Simplex Valve & Meter Co., Phila., Pa.  
**METHANOL (Synthetic Methyl Alcohol.)**  
Du Pont Ammonia Corp., Wilmington, Del.

**MILL MACHINERY and SUPPLIES.**  
Lombard Iron Works & Supply Co., Augusta, Ga.

**MINING MACHINERY.**  
McLanahan-Stone Machine Co., Hollidaysburg, Pa.

**MIXERS (Asphalt.)**  
Erie Machine Shops, Erie, Pa.

—(Hot.)  
Koehring Co., Milwaukee, Wis.

—(Plaster.)  
Blystone Mfg. Co., Cambridge Springs, Pa.

Chain Belt Co., Milwaukee, Wis.

Dunning & Boschart Press Co., Syracuse, N. Y.

Jaeger Machine Co., Columbus, Ohio.

**MORTAR MIXERS.**

Chain Belt Co., Milwaukee, Wis.

Jaeger Machine Co., Columbus, Ohio.

—(Ingredient.)  
Louisville Cement Co., Louisville, Ky.

**MOTORS (Electric.)**

Fairbanks, Morse & Co., Chicago, Ill.

Western Electric Co., New York City.

Westinghouse Elec. & Mfg. Co., E. Pitts-

burgh, Pa.

—(Gasoline.)  
Wisconsin Motor Co., Milwaukee, Wis.

**MOTOR TRUCKS.**

International Harvester Co. of America,

Inc., Chicago, Ill.

**NAILS (Cut.)**

Reading Iron Co., Reading, Pa.

—(and Spikes.)

American Steel & Wire Co., Balt., Md.  
Gulf States Steel Co., Birmingham, Ala.  
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.

Youngstown Sheet & Tube Co., Youngs-

town, Ohio.

**NATURAL GAS COMPANIES.**

(Offering Industrial and Com-

mercial Opportunities.)

Arkansas Natural Gas Corp., Shreveport,

La.

**OIL (Fuel and Gas.)**

Gulf Refining Co., Pittsburgh, Pa.

—(Cups.)

Lunkenheimer Co., The, Cincinnati, O.

**ORE-WASHING MACHINERY.**

Georgia Iron Works, Augusta, Ga.  
McLanahan Stone Machine Co., Hollidays-

burg, Pa.

**ORNAMENTAL BRONZE WORK.**

Heath Co., J. S., Waukegan, Ill.

—(Iron Work.)

Roanoke Iron & Bridge Wks., Roanoke,

Va.

Snead Architectural Iron Works, Louis-

ville, Ky.

Southern Engineering Co., Charlotte, N. C.

Stewart Iron Works Co., Cincinnati, O.

**PACKING (Asbestos, Metallic, Rubber, Leather, etc.)**

Jenkins Bros., New York, N. Y.

Johns-Manville Corp., New York, N. Y.

Republic Rubber Co., Youngstown, Ohio.

**PAINT (Aluminum.)**

Aluminum Co. of America, Pittsburgh, Pa.

—(Metal Surfaces.)

Aluminum Co. of America, Pittsburgh, Pa.

Dixon Crucible Co., Jas., Jersey City,

N. J.

Pittsburgh Plate Glass Co., Pittsburgh, Pa.

—(Mill White, for Interior.)

Aluminum Co. of America, Pittsburgh, Pa.

Pittsburgh Plate Glass Co., Pittsburgh, Pa.

Sonneborn Sons, Inc., L., New York.

—(Preservative.)

Cabot, Inc., Samuel, Boston, Mass.

Foster Co., Benjamin, Philadelphia, Pa.

**PANELBOARDS.**

Adam Elec. Co., Frank, St. Louis.

**PARTITIONS (Metal, Folding, Rolling.)**

Kinner Mfg. Co., The, Columbus, Ohio.

Lupton's Sons Co., David, Phila., Pa.

—(Sectionfold, Rolling, Wood.)

Wilson Corp., The, J. G., New York.

**PATENT ATTORNEYS.**

Buck, Sterling P., Washington, D. C.

Coleman, Watson E., Washington, D. C.

Eaton, Paul B., Charlotte, N. C.

Sanett, Edward C., Washington, D. C.

Seymour & Bright, Washington, D. C.

**PATTERNS (Drawing, etc.)**

Hass Pattern Co., A. W., Atlanta, Ga.

**PAVING Blocks (Creosoted Wood.)**

American Creosote Works, New Orleans.

—(Blocks (Rubber.)

Servicized Premoulded Products, Inc.,

Chicago, Ill.

—(Mixers (Concrete.)

Koehring Co., Milwaukee, Wis.

—(Plant (Asphalt.)

Simplicity System Co., Chattanooga, Tenn.

**PENSTOCKS.**

Chicago Bridge & Iron Works, Atlanta.

Pittsburgh-Des Moines Steel Co., Pitts-

burgh, Pa.

Smith Co., S. Morgan, York, Pa.

**PERFORATED METAL.**

Chicago Perforating Co., Chicago, Ill.

Erie Perforating Co., Rochester, N. Y.

Harrington & King Perf. Co., Chicago.

Hendrick Mfg. Co., Carbondale, Pa.

Manhattan Perforated Metal Co., Inc.,

Long Island City, N. Y.

Mundt & Sons, Charles, Jersey City, N. J.

Nortmann-Dunfee Co., Milwaukee, Wis.

**PETROLEUM REFINERS.**

Gulf Refining Co., Pittsburgh, Pa.

**PHOSPHATE ACID.**

Davison Chemical Co., Baltimore, Md.

—(Machinery.)

McLanahan-Stone Machine Co., Hollidays-

burg, Pa.

**PITCH.**

Barrett Co., The, New York, N. Y.

**PLANERS and Mortisers (Hand and Electric.)**

Wappat, Incorporated, Pittsburgh, Pa.

**PIG-IRON.**

Hammond Iron Co., Birmingham, Ala.

Republic Iron & Steel Co., Youngstown,

Ohio.

Sloss-Sheffield Steel & Iron Co., Birmin-

ham, Ala.

Tennessee Coal, Iron & Railroad Co., Bir-

mingham, Ala.

**PILE SHOES.**

Janney, Jr., Jas. A., Phila., Pa.

**PILING (Creosoted.)**

Amer. Creosote Wks., Inc., New Orleans.

Amer. Creosoting Co., Inc., Louisville.

Ayer & Lord Tie Co., Inc., Chicago.

Prettyman & Sons, J. F., Charleston, S. C.

Savannah Creosoting Co., Inc., Savannah.

Wales Wood-Preserving Co., Norfolk, Va.

**PIPE (Steel Sheet.)**

Carnegie Steel Co., Pittsburgh, Pa.

Wemlinger, Inc., New York, N. Y.

Zelnicker Supply Co., W. A., St. Louis.

**PILLOW BLOCKS.**

Goldsen's Fdry. & Mech. Co., Columbus, Ga.

**PIPE.**

Albert & Davidson Pipe Corp., Brooklyn,

N. Y.

Albert Pipe Sup. Co., Inc., Brooklyn, N. Y.

Birmingham Boiler & Engr. Co., Bir-

mingham, Ala.

Central Pipe & Sup. Co., Charleston,

W. Va.

Greenpoint Iron & Pipe Co., Inc., Brook-

lyn, N. Y.

Hammond Iron Co., Birmingham, Ala.

Hudson Pipe & Sup. Co., Bayonne, N. J.

National Tube Co., Pittsburgh, Pa.

Pittsburgh Piping & Equip. Co., Pitts-

burgh, Pa.

Power Piping Co., Pittsburgh, Pa.

Smith Corp., A. O., Milwaukee, Wis.

Youngstown Sheet & Tube Co., Youngs-

town, Ohio.

**PIVOT IRON.**

Reading Iron Co., Reading, Pa.

**PINDERS and Headers.**

Grinnell Co., Inc., Providence, R. I.

**PINDING MACHINES.**

American Pipe B

**PLATES (Steel.)**

Bethlehem Steel Co., Bethlehem, Pa.  
Carnegie Steel Co., Pittsburgh, Pa.  
Central Iron & Steel Co., Harrisburg, Pa.  
Granite City Steel Co., Granite City, Ill.  
Ryerson & Son, Inc., Jas. T., St. Louis  
and New York.  
Tennessee Coal, Iron & Railroad Co., Birmingham.

**PNEUMATIC TOOLS.**

Chicago Pneumatic Tool Co., New York.  
Ingersoll-Rand Co., New York, N. Y.

**POLES (Creosoted.)**

Amer. Creosote Wks., Inc., New Orleans.  
Amer. Creosoting Co., Inc., Louisville, Ky.  
Ayer & Lord Tie Co., Inc., Chicago.  
Prettyman & Sons, J. F., Charleston, S. C.  
Savannah Creosoting Co., Savannah, Ga.  
Taylor-Colquitt Co., Spartanburg, S. C.

**(Tubular, Steel.)**

National Tube Co., Pittsburgh, Pa.

**(Zinc Metal Arsenite Treated.)**

Curtin-Howe Corp., New York City.

**POLISHING MACHINERY.****(Wheels, Blocks.)**

Carborundum Co., Niagara Falls, N. Y.

**PORTABLE HOUSES (Metal.)**

Braden Steel Corp., Tulsa, Okla.  
Maryland Metal Building Co., Balt., Md.

**POST CAPS.**

Duplex Hanger Co., Cleveland, Ohio.

**POSTS (Cast Iron, Railway and Highway.)**

U. S. Pipe & Foundry Co., Burlington, N. J.

**POWER TRANSMISSION MACHINERY.**

American Pulley Co., Philadelphia, Pa.  
Diamond Chain & Mfg. Co., Indianapolis.  
Foote Bros. Gear & Machine Co., Chicago.  
Golden's Fdry. & Mfg. Co., Columbus, Ga.  
Morse Chain Co., Ithaca, N. Y.  
O'Brien Machinery Co., Phila., Pa.  
Schofield's Sons Co., J. S., Macon, Ga.  
Wood's Sons Co., T. B., Chambersburg, Pa.

**PREHEATERS (Air.)**

Combustion Engr. Corp., New York City.

**PRESSES, (Baling, Cottonseed Oil, Hydraulic and Power.)**

Dunning & Bouchert Press Co., Inc.,  
Syracuse, N. Y.  
Ripley Foundry & Machine Co., Ripley, O.

**(Hydraulic Wheel.)**

Inter-State Fdry. & Mach. Wks., Johnson City, Tenn.

**(Metal Stamping.)**

Bilss Co., E. W., Brooklyn, N. Y.

**PRINTERS (Book, Catalog, Job.)**

Smith & Son Co., Oscar T., Baltimore, Md.  
Young & Selden Co., Baltimore, Md.

**PRODUCER (Gas Machines.)**

Gas-O-Flame Stove Works, Port Deposit, Md.  
Morgan Construction Co., Worcester, Mass.  
Wood & Co., R. D., Phila., Pa.

**PULLER-JACKS.**

Edelblute Co., T. H., Pittsburgh, Pa.

**PULLEYS (Friction Clutch.)**

Caldwell Co., Inc., W. E., Louisville, Ky.  
Wood's Sons Co., T. B., Chambersburg, Pa.

**(Motor and Machine.)**

American Pulley Co., Philadelphia, Pa.

**(Steel Split.)**

American Pulley Co., Phila., Pa.  
Shafting and Hangers.

American Pulley Co., Phila., Pa.  
Foote Bros. Gear & Mch. Co., Chicago.  
Golden's Fdry. & Mfg. Co., Columbus, Ga.  
Wood's Sons Co., T. B., Chambersburg, Pa.

**PULVERIZED FUEL EQUIPMENT.**

Combustion Engr. Corp., New York City.  
Fuller Lehigh Co., Fullerton, Pa.

**PULVERIZERS (See Crushing and Pulverizing Machinery.)****PUMPING MACHINERY.**

American Well Works, Aurora, Ill.  
Cameron, A. S., Steam Pump Works  
(Ingersoll-Rand Co.), New York City.  
Chain Belt Co., Milwaukee, Wis.  
Co., Inc., A. D., Lawrenceburg, Ind.  
Fairbanks, Morse & Co., Chicago, Ill.  
Ingersoll-Rand Co. (A. S. Cameron Steam  
Pump Works), New York, N. Y.  
Keystone Pump & Drill Co., Beaver Falls,  
Pa.  
Meyer & Bro. Co., The F. E., Ashland,  
Ohio.  
Platt Iron Works, Dayton, Ohio.  
Viking Pump Co., Cedar Falls, Iowa.

Virginia Mch. & Well Co., Richmond, Va.  
Wood & Co., R. D., Philadelphia, Pa.

**PUMPS (Air.)**

Manistee Iron Works Co., Manistee, Mich.  
(Air Lift.)  
Ingersoll-Rand Co., New York, N. Y.  
Sullivan Machinery Co., Chicago, Ill.

**(Boiler Feed.)**

Allis-Chalmers Mfg. Co., Milwaukee, Wis.  
Cameron, A. S., Steam Pump Works  
(Ingersoll-Rand Co.), New York City.  
DeLaval Steam Turbine Co., Trenton, N. J.  
Erie Pump & Engine Wks., Medina, N. Y.  
Ingersoll-Rand Co. (A. S. Cameron Steam  
Pump Works), New York, N. Y.  
Manistee Iron Works Co., Manistee, Mich.  
Myers & Bro. Co., The F. E., Ashland, O.

**(Centrifugal.)**

Allis-Chalmers Mfg. Co., Milwaukee, Wis.  
American Well Works, Aurora, Ill.  
Cameron, A. S., Steam Pump Works  
(Ingersoll-Rand Co.), New York City.  
DeLaval Steam Turbine Co., Trenton, N. J.  
Emerson Pump & Valve Co., Alexandria,  
Va.

Erie Pump & Engine Wks., Medina, N. Y.  
Fairbanks, Morse & Co., Chicago, Ill.  
Ingersoll-Rand Co. (A. S. Cameron Steam  
Pump Works), New York, N. Y.  
Jaeger Machine Co., Columbus, Ohio.  
Layne & Bowler, Inc., Memphis, Tenn.  
Manistee Iron Works Co., Manistee, Mich.  
Morris Machine Wks., Baldwinville, N. Y.  
Novo Engine Co., Lansing, Mich.  
Wood & Co., R. D., Philadelphia, Pa.

**(Contractors.)**

Emerson Pump & Valve Co., Alexandria,  
Va.  
Erie Pump & Engine Wks., Medina, N. Y.  
Novo Engine Co., Lansing, Mich.

**(Deep Well.)**

American Well Works, Aurora, Ill.  
Cook, Inc., A. D., Lawrenceburg, Ind.  
Keystone Pump and Drill Co., Beaver  
Falls, Pa.

Layne & Bowler, Inc., Memphis, Tenn.  
Novo Engine Co., Lansing, Mich.  
Wood & Co., R. D., Philadelphia, Pa.

**(Diaphragm.)**

Novo Engine Co., Lansing, Mich.  
(Hydraulic.)

Dunning & Bouchert Press Co., Inc.,  
Syracuse, N. Y.  
(Power.)

American Well Works, Aurora, Ill.  
Platt Iron Works, Dayton, Ohio.  
Sterling Engine Co., Buffalo, N. Y.

**(Pulverized Coal.)**

Fuller Lehigh Co., Fullerton, Pa.  
(Rotary.)

Viking Pump Co., Cedar Falls, Iowa.  
(Sand and Dredging.)

Ellicott Machine Corp., Baltimore, Md.  
Erie Pump & Engine Wks., Medina, N. Y.  
Georgia Iron Works, Augusta, Ga.

**(Steam.)**

Cameron, A. S., Steam Pump Works  
(Ingersoll-Rand Co.), New York City.  
Emerson Pump & Valve Co., Alexandria,  
Va.

Fairbanks, Morse & Co., Chicago, Ill.  
Ingersoll-Rand Co. (A. S. Cameron Steam  
Pump Works), New York, N. Y.  
Platt Iron Works, Dayton, Ohio.

**(Vacuum.)**

Allis-Chalmers Mfg. Co., Milwaukee, Wis.  
Chicago Pneumatic Tool Co., New York.  
Ingersoll-Rand Co., New York, N. Y.  
Sullivan Machinery Co., Chicago, Ill.

**(Water Works.)**

American Well Works, Aurora, Ill.  
Layne & Bowler, Inc., Memphis, Tenn.  
Manistee Iron Works Co., Manistee, Mich.

**PUNCHING and SHEARING MACHINERY.**

Beatty Machine & Mfg. Co., Hammond,  
Ind.  
Bliss Co., E. W., Brooklyn, N. Y.  
Whitney Metal Tool Co., Rockford, Ill.

**RACK RAKES.**

Newport News Shipbuilding & Drydock  
Co., Newport News, Va.

**RADIATOR ENCLOSURES.**

Manhattan Perforated Metal Co., Inc.,  
Long Island City, N. Y.

**RAILINGS (Iron Pipe.)**

Pipe Railing Constr. Co., Long Island  
City, N. Y.

— and Grilles, Iron and Brass,  
(Banks and Offices.)

Dufur, Baggott & Co., Baltimore, Md.  
Ludlow Saylor Wire Co., The St. Louis,  
Mo.

**RAILROAD Equipment and Supplies (New.)**

Robinson & Orr, Pittsburgh, Pa.

**— Equipment and Supplies  
(Used.)**

Birmingham Rail & Loco. Co., Birming-  
ham.

Equip. Sales & Rentals Co., Pittsburgh.  
Lewis & Co., Henry, Philadelphia, Pa.

Smith & Co., W. M., Birmingham, Ala.

Southern Iron and Equip. Co., Atlanta.  
Zelnicker Supply Co., W. A., St. Louis.

**(Frogs and Switches.)**

Bethlehem Steel Co., Bethlehem, Pa.  
Frank, M. K., Pittsburgh, Pa.  
Koppel Ind. Car & Equip. Co., Koppel,  
Pa.  
Robinson & Orr, Pittsburgh, Pa.

**RAILROADS — (Offering Industrial, Agricultural and Commercial Opportunities.)**

Atlanta and West Point R. R., Atlanta.  
Central of Georgia Rwy., Savannah, Ga.  
Missouri-Kansas-Texas Lines, Dallas,  
Texas.

Missouri-Pacific Lines, St. Louis, Mo.

Model Land Company, Flagler System,  
St. Augustine, Fla.  
Norfolk & Western Railway, Roanoke, Va.  
Tennessee Central Railway, Nashville,  
Tenn.

**RAILS (New and Used.)**

Birmingham Rail & Locomotive Co., Bir-  
mingham, Ala.  
Carnegie Steel Co., Pittsburgh, Pa.

Frank, M. K., Pittsburgh, Pa.  
Levi & Co., Henry, Philadelphia, Pa.  
Perry, Buxton, Doane Co., Philadelphia.  
Robinson & Orr, Pittsburgh, Pa.

Smith & Co., W. M., Birmingham, Ala.  
Southern Iron & Equip. Co., Atlanta, Ga.  
Sweet's Steel Co., Williamsport, Pa.  
Tennessee Coal, Iron & Railroad Co., Bir-  
mingham, Ala.

Weller & Co., Birmingham, Ala.

Zelnicker Supply Co., W. A., St. Louis.

**RAILWAYS (Industrial.)**

Easton Car & Construction Co., Easton, Pa.  
Koppel Ind. Car & Equip. Co., Koppel,  
Pa.

**(Marine.)**

Charleston Dry Dock and Machine Co.,  
Charleston, S. C.

**RECEPTACLES (Self-Closing, Waste Paper.)**

Whitaker Paper Co., Baltimore, Md.

**REELS and SPOOLS. (Pressed Metal.)**

American Pulley Co., Philadelphia, Pa.

**REFRACTORIES.**

Harrison-Walker Refractories Co., Pitts-  
burgh.

Taylor Sons Co., Charles, Cincinnati.

**REFRIGERATING Machinery  
(See Ice and Refrigerating Machinery and Supplies.)****REINFORCING for Concrete.**

American Steel and Wire Co., Balt., Md.  
Carnegie Steel Co., Pittsburgh, Pa.

Connors Steel Co., Birmingham, Ala.  
Dietrich Brothers, Baltimore, Md.  
Gulf States Steel Co., Birmingham, Ala.  
Knoxville Iron Co., Knoxville, Tenn.  
National Steel Fabric Co., Pittsburgh, Pa.

Pidgeon-Thomas Iron Co., Memphis, Tenn.  
Ryerson & Son, Inc., Jas. T., St. Louis  
and New York.

Southern Engineering Co., Charlotte, N. C.  
Truscon Steel Co., Youngstown, O.

Truscon Steel Co., Youngstown, O.

Truscon Steel Co., Youngstown, O.

**RETORTS (Special Process-Riveted or Welded.)**

Biggs Boiler Works, Akron, Ohio.

**RIVER & HARBOR IMPROVEMENTS, (Dredging, Docks, Wharves, etc.)**

Arundel Corp., The, Baltimore, Md.  
Atlantic Gulf and Pacific Co., New York.  
Kansas City Bridge Co., Kansas City.

**RIVETS.**

Russell, Burdsall & Ward Bolt & Nut  
Co., Port Chester, N. Y.

**ROAD and Street Machinery.**

Acme Road Mchry. Co., Frankfort, N. Y.  
Adams Co., J. D., Indianapolis, Ind.  
Austin-Western Road Mchry. Co., Chicago.  
Buffalo-Springfield Roller Co., Spring-  
field, O.

Caterpillar Tractor Co., San Leandro, Cal.  
Erie Machine Shop, Erie, Pa.  
Huber Mfg. Co., The, Marion, Ohio.  
Universal Crane Co., Lorain, Ohio.

**— and Street Material.**

Bituminous Earth Road Corp., Raleigh,  
N. C.  
Boxley & Co., W. W., Roanoke, Va.  
Interstate Amesite Co., Wilmington, Del.  
Kentucky Rock Asphalt Co., Louisville,  
Ky.

Shell Petroleum Corp., New Orleans.  
Sloss-Sheffield Steel and Iron Co., Bir-  
mingham, Ala.

Truscon Steel Co., Youngstown, O.

Woodstock Slag Corp., Birmingham, Ala.

**— Graders and Scrapers.**

Aeme Road Mchry. Co., Frankfort, N. Y.  
Adams Co., J. D., Indianapolis, Ind.  
Austin-Western Road Mchry. Co., Chicago.  
Galon Iron Works & Mfg. Co., Galion, O.

Caterpillar Tractor Co., San Leandro, Cal.

**SCAFFOLDING (Wooden.)**

Patent Scaffolding Co., Chicago, Ill.

**SCALES (Industrial, Platform.)**

American Kron Scale Co., New York  
City.

**— (Textile.)**

American Kron Scale Co., New York  
City.

**SCOOPS (Hand.)**

American Mfg. Co., Chattanooga, Tenn.

**— Wheeled.**

Riddell Co., W. A., Bucyrus, Ohio.

**OILS and PRESERVATIVES.**

Gulf Refining Co., Pittsburgh, Pa.

Shell Petroleum Corp., New Orleans.

**— Reinforcement (Welded**

Fabric.)

American Steel & Wire Co., Balt., Md.

National Steel Fabric Co., Pittsburgh, Pa.

**— Rollers (Steam and Gasoline.)**

Acme Road Mchry. Co., Frankfort, N. Y.

Austin-Western Road Mchry. Co., Chicago.

Buffalo-Springfield Roller Co., Spring-  
field, O.

Erie Machine Shop, Erie, Pa.

Galon Iron Works & Mfg. Co., Galion, O.

Huber Mfg. Co., The, Marion, Ohio.

**— Rollers (For Concrete Work.)**

Macon Concrete Roller Co., Macon, Ga.

**— SCARIFIERS.**

Austin-Western Road Mchry. Co., Chicago.

Buffalo-Springfield Roller Co., Spring-  
field, O.

**— ROOFING (Asphalt, Built-up.)**

Barber Asphalt Co., Philadelphia, Pa.

**— (Ready Prepared, Felt, Tar, Asbestos, Asphalt.)**

Amber Asbestos Shingle & Sheathing Co.,  
Amber, Pa.

Barrett Co., The, New York, N. Y.

Eternit, Inc., St. Louis, Mo.

Johns-Manville Corp., New York, N. Y.

Serviceless Pre-moulded Products, Inc.,  
Chicago, Ill.

**— and Siding (Composition.)**

Eternit, Inc., St. Louis, Mo.

Johns-Manville Corp., New York, N. Y.

**— and Siding (Metal.)**

American Rolling Mill Co., Middletown, O.

American Sheet and Tin Plate Co., Pitt

**SCRAP IRON AND STEEL.**  
Hunts Sons, M. J., Philadelphia, Pa.  
Perry, Buxton, Doane Co., Philadelphia.  
Smith & Co., W. M., Birmingham, Ala.

**SCREENING (For Concrete and Road Construction.)**  
American Limestone Co., Knoxville, Tenn.

**SCREENS (Sand, Gravel, Stone, Coal, Ore, etc.)**  
Chicago Perforating Co., Chicago, Ill.  
Erdie Perforating Co., Rochester, N. Y.  
Hendrick Mfg. Co., Carbondale, Pa.  
Ludlow Saylor Wire Co., The St. Louis, Mo.  
McLanahan-Stone Machine Co., Hollidaysburg, Pa.  
Mundt & Sons, Charles, Jersey City, N. J.  
Nortmann-Durke Co., Milwaukee, Wis.  
Stephens-Adams Mfg. Co., Birmingham, Ala.  
Sturtevant Mill Co., Boston, Mass.  
Universal Crusher Co., Cedar Rapids, Iowa.

**SCREW-Machine Products.**  
Progressive Mfg. Co., Torrington, Conn.

**SCREWS (Machine.)**  
Progressive Mfg. Co., Torrington, Conn.

**SEATING (Churches, Schools, Halls, etc.)**  
Brunswick Seating Works, Lawrenceville, Va.

**SEAWALLS.**  
Shore-Line Builders, Inc., Jacksonville, Fla.

**SEPARATORS (Air.)**  
Sturtevant Mill Co., Boston, Mass.  
—(Dust.)  
Raymond Bros., Impact Pulv. Co., Chicago.

**SEPTIC TANKS.**  
Kaustine Co., Inc., Perry, N. Y.

**SEWAGE Disposal Apparatus.**  
Kaustine Co., Inc., Perry, N. Y.  
Pacific Flush-Tank Co., New York, N. Y.

**SEWER Joint Compounds.**  
Pacific Flush-Tank Co., New York, N. Y.  
Servicised Premoulded Products, Inc., Chicago, Ill.

—(Pipe (Vitrified))  
Banno Pipe Co., Louisville, Ky.  
Cantaria Clay Products Co., Blackflock, O.  
Doe Co., Wm. E., Oak Hill, Ohio.  
Lee Clay Products Co., Clearfield, Ky.  
Owensboro Sewer Pipe Co., Owensboro, Ky.

**SHADES (Offset.)**  
Hough Shade Corp., Chicago, Ill.

**SHAFTING.**  
Foote Bros., Gear & Mach. Co., Chicago.  
Ryerson & Sons, Inc., Jas. T., St. Louis and New York.

—(Cold Rolled.)  
Bliss & Laughlin, Inc., Harvey, Ill.

—(Flexible.)  
Brand & Co., N. A., Chicago, Ill.

—(Material (Tubular.)  
National Tube Co., Pittsburgh, Pa.

—(Spinned.)  
Ohio Gear Co., Cleveland, Ohio.

**SHARPENING Stones.**  
Carborundum Co., Niagara Falls, N. Y.

**SHEET Metal Work.**  
National Blow Pipe & Mfg. Co., Ltd., New Orleans, La.

—(Metal Working Machinery.)  
Bliss Co., E. W., Brooklyn, N. Y.  
Whitney Metal Tool Co., Rockford, Ill.  
Yoder Co., The, Cleveland, Ohio.

—(Steel and Iron.)  
American Rolling Mill Co., Middletown, O.  
American Sheet and Tin Plate Co., Pittsburgh, Pa.

Bethlehem Steel Co., Bethlehem, Pa.  
Granite City Steel Co., Granite City, Ill.  
Republic Iron & Steel Co., Youngstown, O.  
Ryerson & Son, Inc., Jas. T., St. Louis and New York.

Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.  
Youngstown Sheet & Tube Co., Youngstown, O.

**SHEETS (Asbestos.)**  
Amber Asbestos Shingle & Sheathing Co., Amber, Pa.  
Eternit, Inc., St. Louis, Mo.

**SHELVING (Unit.)**  
Lupton's Sons Co., David, Phila., Pa.

**SHINGLES (Asbestos.)**  
Amber Asbestos Shingle & Sheathing Co., Amber, Pa.  
Eternit, Inc., St. Louis, Mo.

—(Stain.)  
Cabot, Inc., Samuel, Boston, Mass.  
**SHORES (Self-Locking, Adjustable.)**  
Roos, Co., H. W., Cincinnati, Ohio.

**SHOVELS (Hand.)**  
American Mfg. Co., Chattanooga, Tenn.

—(Steam, Gas and Electric Power.)  
Bucyrus-Erie Co., Erie, Penna.  
Harnischfeger Corp., Milwaukee, Wis.  
Industrial Brownhoist Corp., Cleveland, O.  
Northwest Engineering Co., Chicago, Ill.  
Ohio Power Shovel Co., Lima, Ohio.  
The Shovel Co., The, Lorain, Ohio.  
Universal Power Shovel Co., Milwaukee, Wis.

**SHUTTERS (Steel.)**  
Merchant & Evans Co., Philadelphia, Pa.  
Peele Co., The, Brooklyn, N. Y.  
—(Steel and Wood Bifolding.)  
Kinnear Mfg. Co., The, Columbus, Ohio.

**SILICATE OF SODA.**  
Crasselli Chemical Co., Inc., Birmingham, Ala.

**SITES (Manufacturing.)**  
Alabama Power Co., Birmingham, Ala.  
Arkansas Natural Gas Corp., Shreveport, La.

Atlanta and West Point R. R., Atlanta, Ga., Industrial Bureau C. of C. Brown & Co., Chattanooga, Tenn.  
Central of Georgia Rwy., Savannah, Ga.  
Central Power & Light Co., San Antonio.  
Duke Power Co., Charlotte, N. C.  
Galveston City of, Galveston, Texas.  
Georgia Power Co., Atlanta, Ga.  
Industrial Dallas, Inc., Dallas, Texas.  
Jacksonville, City of Jacksonville, Florida.  
Kentucky Utilities Co., Louisville, Ky.  
Missouri-Kansas-Texas Lines, Dallas, Texas.  
Missouri-Pacific Lines, St. Louis, Mo.  
Model Land Company, (Flagler System), St. Augustine, Fla.  
New Orleans Assn. of Commerce, New Orleans, La.  
Norfolk & Western Railway, Roanoke, Va.  
Oklahoma City Chamber of Commerce, Oklahoma City, Okla.  
Tennessee Central Railway, Nashville, Tenn.  
Tennessee Electric Power Co., Chattanooga, Tenn.  
Texas Power & Light Co., Dallas, Texas.

**SKYLIGHTS.**  
Robertson Co., H. H., Pittsburgh, Pa.

**SLABS (Concrete Floor.)**  
American Cement Tile Mfg. Co., Pittsburgh, Pa.

—(Concrete Roof.)  
American Cement Tile Mfg. Co., Pittsburgh, Pa.

**SLAG, For Concrete.**  
Sloss-Sheffield Steel and Iron Co., Birmingham, Ala.  
Woodstock Slag Corp., Birmingham, Ala.

—(Furnace.)  
Sloss-Sheffield Steel and Iron Co., Birmingham, Ala.  
Woodstock Slag Corp., Birmingham, Ala.

**SLINGS (Chain.)**  
Woodstock Chain Works, Trenton, N. J.

—(Wire Rope.)  
Roebeling's Sons Co., John A., Trenton, N. J.

**SLUICE GATES AND APPARANCES.**  
Smith Co., S. Morgan, York, Pa.

**SMELTERS.**  
Swenson Evaporator Co., Harvey, Ill.

**SNATCH BLOCKS (For Wire and Manila Rope.)**  
Patterson Co., W. W., Pittsburgh.

**SPADES.**  
American Mfg. Co., Chattanooga, Tenn.

**SPEED REDUCERS.**

Earle Gear & Mach. Co., Phila., Pa.  
Foote Bros. Gear & Mch. Co., Chicago.  
Morse Chain Co., Ithaca, N. Y.  
Stephens-Adamson Mfg. Co., Birmingham, Ala.

**SPIKES, (Railroad, Ship.)**  
Bethlehem Steel Co., Bethlehem, Pa.  
Republic Iron & Steel Co., Youngstown, O.  
Sweet's Steel Co., Williamsport, Pa.

**SPRINGS (Machinery, Railway, Spiral Steel.)**  
American Steel & Wire Co., Balto., Md.  
Raymond Mfg. Co., Corry, Pa.

—(Wire—All Kinds.)  
American Steel & Wire Co., Balto., Md.

**SPRINKLERS (Automatic Fire.)**  
Grinnell Co., Inc., Providence, R. I.

**SPROCKETS.**  
Diamond Chain & Mfg. Co., Indianapolis.  
Foote Bros. Gear & Mch. Co., Chicago.  
Morse Chain Co., Ithaca, N. Y.

**STACKS (Iron and Steel.)**

Biggs Boiler Works Co., Akron, Ohio.  
Birmingham Boiler & Engr. Co., Birmingham, Ala.  
Carolina Steel & Iron Co., Greensboro, N. C.

Central Iron & Steel Co., Harrisburg, Pa.

Chattanooga Boiler & Tank Co., Chattanooga, Tenn.

Chicago Bridge & Iron Works, Atlanta, Ga.

Combustion Engr. Corp., New York City.

Hammond Iron Works, Warren, Pa.

Indals Iron Works Co., Birmingham, Ala.

Mecklenburg Iron Works, Charlotte, N. C.

Phoenix Iron Co., The, Phila., Pa.

Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.

—**Tank Heads.**

Commercial Shearing & Stamping Co., Youngstown, Ohio.

**STENCIL CUTTING MACHINES.**

Diagrap Stencil Machine Corp., St. Louis, Mo.

**STOKERS (Mechanical.)**

Babcock & Wilcox Co., The, New York.

Combustion Engr. Corp., New York City.

**STORAGE Batteries.**

Electric Storage Battery Co., Philadelphia.

—**Bins (Steel.)**

Blaw-Knox Co., Pittsburgh, Pa.

Butler Bin Co., Waukesha, Wis.

**STRIPS (Steel.)**

American Steel & Wire Co., Baltimore.

**STRUCTURAL STEEL (Hot Galvanized.)**

Bessemer Galvanizing Works, Birmingham.

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American Bridge Co., New York, N. Y.

Baltimore Iron Works, Philadelphia, Pa.

Carnegie Steel Co., Pittsburgh, Pa.

Caroline Steel & Iron Co., Greensboro, N. C.

Champion Bridge Co., Wilmington, Ohio.

Converse Bridge & Steel Co., Chattanooga, Tenn.

Dietrich Brothers, Baltimore, Md.

Eliehay, Jr., Co., John, Pittsburgh.

Erie Steel Constr. Co., Erie, Pa.

Ingalls Iron Works Co., Birmingham, Ala.

McClintic-Marshall Co., Pittsburgh, Pa.

Nashville Bridge Co., Nashville, Tenn.

Phoenix Iron Co., The, Phila., Pa.

Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.

Republiec Iron & Steel Co., Youngstown, O.

Richmond Struc. Steel Co., Richmond, Va.

Roanoke Iron & Bridge Works, Inc., Roanoke, Va.

Ryerson & Son, Inc., Jos. T., St. Louis and New York.

Smeal Architectural Iron Works, Louisville, Ky.

Southern Engineering Co., Charlotte, N. C.

Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.

Virginia Bridge & Iron Co., Roanoke, Va.

**SULPHATE OF ALUMINA.**

Grasselli Chemical Co., Inc., Birmingham, Ala.

—**Pulp Mills.**

Swenson Evaporator Co., Harvey, Ill.

**SULPHIDE OF SODA.**

Grasselli Chemical Co., Inc., Birmingham, Ala.

**SULPHURIC ACID.**

Darison Chemical Co., The, Balto., Md.

Du Pont de Nemours & Co., Inc., E. I. du Pont, Wilmington, Del.

**SUPER-HEATERS (Steam.)**

Babcock & Wilcox Co., The, New York.

**SURVEYING INSTRUMENTS.**

Weber Co., Inc., F., Philadelphia, Pa.

**SURVEYORS (Quantity.)**

Spring, Charles Herbert, Greensboro, N. C.

**SWINGING ENGINES.**

Dake Engine Co., Grand Haven, Mich.

**SWITCHBOARDS, SWITCHES, ETC.**

Adam Elec. Co., Frank, St. Louis.

Westinghouse Elec. & Mfg. Co., E. Pitts-

burgh, Pa.

**SYSTEMS (Business.)**

Ernst & Ernst, New York, N. Y.

**TACKLE BLOCKS (For Wire and Manila Rope.)**

Patterson Co., W. W., Pittsburgh.

**TANKS (Air Compressor.)**  
Air-Tight Steel Tank Co., Pittsburgh, Pa.

Seafire & Sons, Wm. B., Oakmont, Pa.

Titusville Iron Works Co., Titusville, Pa.

—(Elevated Steel.)  
Caldwell Co., Inc., W. E., Louisville, Ky.

Chicago Bridge & Iron Works, Atlanta, Ga.

Coile Mfg. Co., R. D., Newnan, Ga.

Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.

Schofield's Sons Co., J. S., Macon, Ga.

Virginia Bridge & Iron Co., Roanoke, Va.

—(Elevated Wood.)  
Caldwell Co., Inc., W. E., Louisville, Ky.

Davis & Son, G. M., Palatka, Fla.

Woolford Wood Tank Mfg. Co., G. Paschall P. O., Philadelphia.

—(Iron and Steel.)  
Air-Tight Steel Tank Co., Pittsburgh, Pa.

American Bridge Co., New York, N. Y.

Biggs Boiler Works Co., Akron, Ohio.

Birmingham Tank Co., Birmingham.

Chattanooga Boiler & Tank Co., Chattanooga, Tenn.

Chicago Bridge & Iron Works, Atlanta, Ga.

Coile Mfg. Co., R. D., Newnan, Ga.

Downingtown Iron Works, Downingtown, Pa.

Hammond Iron Works, Warren, Pa.

Lombard Iron Works & Supply Co., Aurora, Ill.

McClintic-Marshall Co., Pittsburgh, Pa.

Mecklenburg Iron Works, Charlotte, N. C.

Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.

Seafire & Sons, Wm. B., Oakmont, Pa.

Schofield's Sons Co., J. S., Macon, Ga.

Titusville Iron Works Co., Titusville, Pa.

Virginia Bridge & Iron Co., Roanoke, Va.

Westinghouse Traction Brake Co., Wimberley, Pa.

—(Seamless Steel.)  
Janney, Jr., Jas. A., Phila., Pa.

National Tube Co., Pittsburgh, Pa.

—(Storage, Oil, etc.)  
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Birmingham Boiler & Engr. Co., Birmingham, Ala.

Chicago Bridge & Iron Works, Atlanta, Ga.

Downingtown Iron Works, Downingtown, Pa.

Hammond Iron Works, Warren, Pa.

Ingalin Iron Works Co., Birmingham, Ala.

Mecklenburg Iron Works, Charlotte, N. C.

Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.

Titusville Iron Works Co., Titusville, Pa.

—(Wood.)  
Caldwell Co., Inc., W. E., Louisville, Ky.

Davis & Son, G. M., Palatka, Fla.

Virginia Mch. & Well Co., Richmond, Va.

Woolford Wood Tank Mfg. Co., G. Paschall P. O., Philadelphia.

—(Wood Pickling.)  
Woolford Wood Tank Mfg. Co., G. Paschall P. O., Philadelphia.

**TAPE (Insulating.)**  
Okonite Co., New York, N. Y.

—(Measuring.)  
Lufkin Rule Co., Saginaw, Mich.

**TAX SPECIALISTS.**  
Ernst & Ernst, New York, N. Y.

Le Baron, Ernest T., Jacksonville, Fla.

**TELEPHONE SERVICE.**  
American Telephone & Telegraph Co.

**TERRA COTTA (Ornamental.)**  
Atlanta Terra Cotta Co., Atlanta, Ga.

**TEXTILE CHEMICALS.**  
Grasselli Chemical Co., Inc., Birmingham, Ala.

**TILE (Cement Roofing.)**  
American Cement Tile Mfg. Co., Pittsburgh, Pa.

—(Cork Composition.)  
Congoleum-Nairn, Inc., Kearny, N. J.

—(Cork Flooring.)  
Congoleum-Nairn, Inc., Kearny, N. J.

—(Hollow Building.)  
Cambric Clay Products Co., Blackford, Ohio.

—(Roof.)  
Hood Co., E. Mifflin, Daisy, Tenn.

—(Rubber.)  
Congoleum-Nairn, Inc., Kearny, N. J.

—(Sewer.)  
Lee Clay Products Co., Clearfield, Ky.

**TIMBER Fittings.**  
Duplex Hanger Co., Cleveland, Ohio.

—(Creosoted.)  
Amer. Creosote Wks., Inc., New Orleans.

Amer. Creosoting Co., Inc., Louisville, Ky.

Prettyman & Sons, J. F., Charleston, S. C.

**TIME Recorders.**  
Kaiser Klock Co., L. E., Baltimore, Md.

**TIN AND TERNE PLATES.**  
American Sheet & Tin Plate Co., Pittsburgh, Pa.

Bethlehem Steel Co., Bethlehem, Pa.

Granite City Steel Co., Granite City, Ill.

Youngstown Sheet & Tube Co., Youngstown, Ohio.

**TOBACCO MACHINERY.**  
Ripley Foundry & Machine Co., Ripley, O.

**TOILET TISSUE.**  
Victoria Paper Mills Co., Fulton, N. Y.

**TOOLS (Measuring.)**  
Lufkin Rule Co., Saginaw, Mich.

—(Woodworking—Portable.)  
Electric, Hand.)  
Wappat, Incorporated, Pittsburgh, Pa.

**TORCHES (Blow.)**  
Wall Mfg. Supply Co., P., Pittsburgh, Pa.

**—(Kerosene.)**  
St. Paul Welding & Mfg. Co., St. Paul, Minn.

**TOWERS (Electric Transmission.)**  
American Bridge Co., New York, N. Y.

Bessemer Galvanizing Works, Birmingham.

Nashville Bridge Co., Nashville, Tenn.

—(Radio.)  
Bessemer Galv. Wks., Birmingham, Ala.

—(Steel and Wood.)  
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.

Cole Mfg. Co., R. D., Newnan, Ga.

**TRACK (Portable or Permanent.)**  
Sweet's Steel Co., Williamsport, Pa.

**TRACTORS (Industrial.)**  
Atlas Car & Mfg. Co., The, Cleveland, O.

Caterpillar Tractor Co., San Leandro, Cal.

Clark Tractor Co., Battle Creek, Mich.

Cleveland Tractor Co., Cleveland, Ohio.

International Harvester Co., of America, Inc., Chicago, Ill.

—(Road.)  
Caterpillar Tractor Co., San Leandro, Cal.

Cleveland Tractor Co., Cleveland, Ohio.

—(Attachments (Side Boom.)  
W-K-M Co., Inc., Houston, Texas.

**TRAILERS (Drop Frame.)**  
Fruehau Trailor Co., Detroit, Mich.

—(Four Wheel.)  
Electric Wheel Co., Quincy, Ill.

Fruehau Trailor Co., Detroit, Mich.

—(Heavy Duty.)  
Electric Wheel Co., Quincy, Ill.

Fruehau Trailor Co., Detroit, Mich.

—(Industrial.)  
Easton Car & Construction Co., Easton, Pa.

Electric Wheel Co., Quincy, Ill.

—(Pole.)  
Electric Wheel Co., Quincy, Ill.

Fruehau Trailor Co., Detroit, Mich.

**TRAMWAYS (Aerial Wire Rope.)**  
American Steel & Wire Co., Balt., Md.

Broderick & Bascom Rope Co., St. Louis.

Leschen & Sons Rope Co., A., St. Louis.

**TRANSFORMERS.**  
Westinghouse Elec. & Mfg. Co., E. Pittsburgh, Pa.

—(Used.)  
Electric Service Co., Cincinnati, Ohio.

**TRANSMISSION TOWERS (Galvanized.)**  
Bessemer Galvanizing Works, Birmingham.

McClintic-Marshall Co., Pittsburgh, Pa.

**TRENCH MACHINERY. See Excavators (Trench.)**

**TRESTLES (Wooden.)**  
Patent Scaffolding Co., Chicago, Ill.

**TRI-SODIUM PHOSPHATE.**  
Grasselli Chemical Co., Inc., Birmingham, Ala.

**TROLLEY WHEELS (Self Oiling.)**  
Moccasin Bushing Co., Chattanooga, Tenn.

**TRUCK CRANES.**  
Universal Crane Co., Lorain, O.

**TRUCKS (Dry Kiln.)**  
Moore Dry Kiln Co., Jacksonville, Fla.

—(Industrial.)  
Atlas Car & Mfg. Co., The, Cleveland, O.

Clark Tractor Co., Battle Creek, Mich.

Lansing Co., Lansing, Mich.

Service Caster & Truck Co., Albion, Mich.

—(Motor.)  
International Harvester Co., of America, Inc., Chicago, Ill.

**WATERPROOFING (For Brick, Concrete, Granite.)**  
Asphalt Products Co., Syracuse, N. Y.

Foster Co., Benjamin, Philadelphia, Pa.

Servicized Premoulded Products, Inc., Chicago, Ill.

Solvay Sales Corp., New York City.

Senneborn, Sons, Inc., La., New York.

**WATER Purification.**  
Roberts Filter Mfg. Co., Darby (Phila.), Pa.

Seafire & Sons, Wm. B., Oakmont, Pa.

—(Softening Apparatus (Purifying.)  
American Water Softener Co., Phila., Pa.

International Filter Co., Chicago, Ill.

—(Works) Supplies and Appliances.

Amer. Cast Iron Pipe Co., Birmingham.

Cast Iron Pipe Research Assn., Chicago.

Columbian Iron Works, Chattanooga, Tenn.

—(Platform, Freight, Mill, Factory, etc.)  
American Pulley Co., Philadelphia, Pa.

Clark Tractor Co., Battle Creek, Mich.

Electric Wheel Co., Quincy, Ill.

Service Caster & Truck Co., Albion, Mich.

Truscon Steel Co., (Pressed Steel Division) Cleveland, Ohio.

—(Steel Shop.)  
Angle Steel Steel Co., Plainwell, Mich.

**TUBES (Boiler.)** See Boiler Tubes.

**TUBING (Metal.)**  
Boiler Tube Co., of America, Pittsburgh.

—(Seamless Steel.)  
National Tube Co., Pittsburgh, Pa.

Timken Rolling Gear Co., Canton, O.

**TURBINES (Hydraulic.)**  
Cook, Inc., A. D., Lawrenceburg, Ind.

Leffel & Co., The James, Springfield, O.

Smith Co., S. Morgan, York, Pa.

—(Steam.)  
Allis-Chalmers Mfg. Co., Milwaukee, Wis.

DeLaval Steam Turbine Co., Trenton, N. J.

Westinghouse Elec. & Mfg. Co., E. Pittsburgh, Pa.

**WELL CONTRACTORS (Oil, Artesian, etc.)**  
Virginia Machy. & Well Co., Richmond, Va.

**WHEELBARROWS.**  
Lansing Co., Lansing, Mich.

Sterling Wheelbarrow Co., Milwaukee.

**WHEELS AND AXLES.**  
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**WINCHES.**  
Sagam Derrick Co., Chicago, Ill.

**WINDOW Frames and Sash (Metal.)**  
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Detroit Steel Products Co., Detroit, Mich.

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Westinghouse Traction Brake Co., Wimberley, Pa.

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Anchored Post Fence Co., Baltimore, Md.

Gulf States Steel Co., Birmingham, Ala.

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American Steel & Wire Co., Balt., Md.

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American Steel & Wire Co., Chicago, Ill.

Roebeling's Sons Co., John A., Trenton, N. J.

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Harrington & King Perf. Co., Chicago.

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—(Goods.)  
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—(Netting.)  
Ludlow Saylor Wire Co., The, St. Louis, Mo.

—(Rope (Transmission, Hoisting, Haulage.)  
American Steel & Wire Co., Chicago, Ill.

Broderick & Bascom Rope Co., St. Louis.

Leschen & Sons Rope Co., A., St. Louis.

Roebeling's Sons Co., John A., Trenton, N. J.

—(Rope Clips.)  
American Steel & Wire Co., Balt., Md.

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**WOODWORKING MACHINERY.**  
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AN INTERNATIONAL ORGANIZATION

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Special attention is given to the accurate finishing of all machined surfaces, adding to life and efficiency. They can be obtained in all sizes from  $\frac{1}{2}$ " to 13 ft. in diameter.



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We build operating machinery for all types of movable bridges, gates, locks, dredges, large valves, etc.

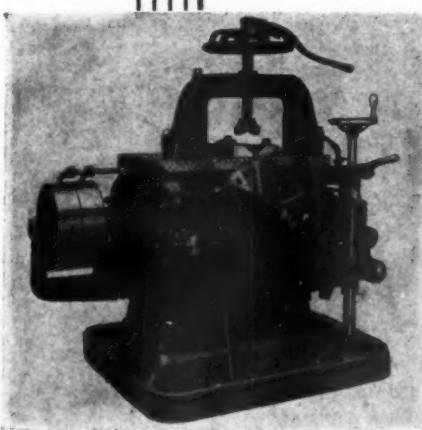
The Earle Power Unit, gasoline or motor driven, for example, meets this need efficiently and dependably. Motor and transmission box are mounted on a compact base. The unit is adaptable to various requirements.

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Will saw round stock, rails and structural steel into intricate shapes that would be impossible with an ordinary saw. Stock can be clamped accurately and firmly in jig time. Built in 5 sizes for  $5\frac{1}{2}$  to 11 in. rounds, 5 to 10 in. squares and 9 to 20-in. I-beams on flat. Send for booklet "Economy in Cold Sawing."



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For ordinary service we recommend a cast iron worm gear and a steel worm; for high speeds or extra heavy duty a bronze worm gear and a steel worm. Earle Worm Wheels are made in sizes from  $\frac{1}{2}$  in. to 30 ft. in diameter.

May we quote on your requirements?

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ALL BEARINGS... and even drums... from 36" boom point sheave to the conical rollers on the rotating path are Timken equipped — an absolute minimum of friction losses. (You can actually swing the shovel from the ground by hand.)

90% OF ALL CASTINGS used in the Lima "101" are steel — several tons more than are used on any other shovel of similar rated capacity. Quality inbuilt to insure long, uninterrupted service.

FULL FLOATING DRIVE SHAFT — relieved of all bearing pressure from the shovel by five hammered alloy steel, heat treated axles — permits of steering, by wheel from operator's seat in the cab, a radius in twice the width of the crawler trucks or in a wide radius.

SINGLE LINE HOIST for super-speed and super-power. No extra, small diameter sheaves to flex and wear out cable — not even a bail to interfere with hoisting above the boom.



LIMA  
"101"

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EXCLUSIVE, INDEPENDENT DIFFERENTIAL CROWD permits of fast, cushioned shaking of the dipper. Powerful enough to crowd out loaded dipper to last tooth in racking with ease — and positive enough to hold it there indefinitely.

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Since the first day that LIMA "101" stepped into the field as a finished standardized gasoline shovel, dragline, crane and drag-shovel, it has been outperforming all other 1 yard and 1 1/4 yard shovels on the market. Its power, speed and dependability have attracted the attention of the whole excavating industry. No other excavator of the same capacity has so many new and practical features — features that insure longer life, greater profits, and ease of operation.

A copy of Bulletin 301 which illustrates and describes the LIMA "101" in detail will be sent on request.

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Division of Lima Locomotive Works Incorporated

Lima, Ohio

Western Office  
846 Strass Bldg.,  
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Eastern Office  
2351 Graybar Bldg.,  
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LIMA "101"

